

INSIDE DOPE

by GEORGE F. TAUBENECK

Fabulous Rickey
The Glamorous Past
Notorious 'Bonders'
And They Paid Him \$20,000
Dark Horse
In Two Words: Im Possible
His Irony Backfired
The Moaner's Bench

Fabulous Rickey

Saints and sinners alike were lampooned in a minstrel show backed by a group of New York sports writers. Best-received skit had the end-men impersonating Branch Rickey and "Dixie" Walker in a haggle over Walker's next contract.

"Mistuh Rickey, suh," needed the Walker impersonator, "you ain't gonna miss that money. You got plenty. And you can't take it with you, y'know."

"Howzzat again?"

"I said: Mistuh Rickey, you can't take it with you."

Ten silent seconds ensued while the spurious Rickey pondered this bit of philosophy.

"If I can't take it with me," he philosophized, "I won't go."

With the Korean war apparently well in hand, the American public is relaxing now in the enjoyment of a great American institution: the World Series.

"Dope," a red-hot baseball fan, enters into the spirit of the occasion with a series of baseball yarns and anecdotes. More will follow next week.

Mrs. Branch Rickey has become accustomed to her husband's irregular hours and absent-minded reactions, and still she's mighty proud of her Ol' Man.

Nearly every Sunday Mr. and Mrs. Rickey are driven by chauffeur down to their Maryland farm. One Easter when they were en route for this regular destination, Mrs. Rickey was clad in new finery, topped off with a bonnet of straw and vari-colored flowers. Patiently she waited for some word of approval from her pre-occupied spouse.

"Don't you like it, dear?" she timidly, breaking a long silence.

"Huh? Like what?"

"My new Easter bonnet."

"Hm-mm," he frowned, after a casual and disapproving glance in her direction.

Without saying a word, Mrs. Rickey lowered the window, doffed the new confection of a hat, and tossed it away.

"Judas Priest," ejaculated her startled husband. "Why did you do that?"

"Honey," she sweet-talked, "if you don't like it, neither do I."

With a wife like that, it's no wonder that Branch Rickey is a multi-millionaire.

Whether or not these oddities were dreamed up by a publicity man we don't know, but several sports "authorities" have written that:

(1) Branch Rickey, Pooh-bah of the Brooklyn Dodgers, is so unmechanical that he has an open ignition switch put in every car he buys. Can't be bothered with keys.

(2) His son is also a minor-detail shunner. Instead of dog-earing or otherwise marking the spot where he quits reading a book, he merely tears out the preceding pages.

Could be. Du Pont's employment chief says that his tests—while weighted in favor of normal people—don't screen out eccentrics. "Otherwise," he observes, "we'd eliminate the kind of fellows who could invent something like Nylon."

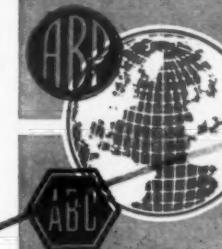
The Glamorous Past

Ty Cobb won so many American League batting championships that some believe the immortal Cobb must have practiced necromancy and chicanery.

He had, of course, but he didn't let his thinning hair down about it.

(Concluded on Page 10, Column 1)

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New Models In '51 Gibson Line Have Door Shelf

Big Advertising, Sales Promotion Drive Planned For New Appliance Line

GREENVILLE, Mich.—New 1951 lines of refrigerators, ranges, and home freezers together with plans for the biggest advertising and sales promotion campaign in Gibson's 73-year history were introduced recently by the Gibson Refrigerator Co. here.

Production of the new lines has already begun and shipments to distributors are now being made, J. L. Johnson, general sales manager, stated.

Product innovations this year include two 9-cu. ft. refrigerators with full length doors and full length interior design, built-in door racks on several refrigerator models, a "magic" dial on two deluxe ranges which raises or lowers the "Ups-A-Daisy" unit in the deep well cooker, and a new 18-cu. ft. freezer that features a stainless steel work surface lid over the fast freezing compartment.

The new refrigerator line consists of eight models: two low price 7-cu. ft. units, one 8-cu. ft. box, two 9-cu. ft. units, and three 11-cu. ft. units. (Concluded on Page 25, Column 1)

Mfr.-Distributor Panel To Highlight NCRSA Conclave

PHILADELPHIA—Details of the program for its fourth annual convention, to be held Monday and Tuesday, Oct. 16 and 17, at Hotel Astor in New York City, have been announced by the National Commercial Refrigerator Sales Association.

One of the convention highlights will be a manufacturer-distributor panel and open forum. During the panel discussion, set for Monday afternoon, manufacturers and distributors will present their ideas on how the supplier and his distributors can work together to increase sales, solve problems, and further improve service.

Following this discussion, the meeting will be opened for questions from the floor.

Manufacturers scheduled to participate (Concluded on Page 5, Column 1)

NEMA July Freezer Sales Set All-Time Record

(See table, page 27)

NEW YORK CITY—The sale of 76,699 home and farm freezers during July by 26 firms reporting to the National Electrical Manufacturers Association set a new record for monthly sales and boosted the volume for the first seven months of the year ahead of the volume racked up for the entire year, 1949.

According to association figures, the July total was 45% higher than June when the previous monthly sales record was set. It was 147% ahead of July, 1949.

For the seven months, 332,055 freezers have been sold by 26 to 29 firms. This compares with 313,957 for the year 1949 and with 178,952 for (Concluded on Back Page, Column 5)

It's Clear WHEN Freezer Tax Takes Effect—But Not HOW

WASHINGTON, D. C.—What to do about the new 10% manufacturers excise tax on home freezers, which goes into effect on Nov. 1, is one of the top problems currently puzzling freezer manufacturers.

They have this definite information, issued by George J. Schoeneman, commissioner of internal revenue, to work on:

"On and after Nov. 1, 1950, a 10% manufacturer's tax will be applied to household type units for the quick freezing and frozen storage of foods.

"The tax applies to these units and their parts whether they are operated by electricity, gas, kerosene, or gasoline.

"Like the tax on TV, this is not a retail sales tax. The payment is made by the producer, but the amount of the tax may be passed on to the consumer."

That still leaves them with such questions to answer as these:

Should the manufacturer pass on the tax by increasing the suggested retail prices or bill the distributor for the tax separately?

One manufacturer indicated that if he raises the suggested retail price it would have to be more than the 10% he pays for the tax in order to keep the distributor and dealer margins up to present percentage levels. This would make the public mad. If

he billed the tax separately, it would cut distributor and dealer margins and that would antagonize the selling organizations.

What is the dealer going to do about floor stocks in existence on Nov. 1? Is he going to include the tax on units he purchases after that date and not on the ones purchased before? This would have him charging two prices for identically the same unit.

There does not seem to be much the manufacturer can do about this, however.

As for the tax on freezer parts. Just what parts are to be covered? And who is going to pay the tax—the manufacturer of the part or the manufacturer who assembles the complete unit?

Television receiver manufacturers did get some indication of what parts are covered. The internal revenue bureau mentioned specifically television chassis, cabinets, tubes, speakers, amplifiers, power-supply units, and built-in antennae. Then it added the "catch-all" phrase—"and the like."

But freezer manufacturers were given no such guide.

There is still three weeks to come up with some answers, but...

The question now is, has anybody got any aspirin?

Price Controls Near; 55 Industry Firms Administrator Sought Prepare for Dairy Show Oct. 16-21

WASHINGTON, D. C.—With more and more pressure for price controls piling up, it seems certain that they will be imposed sometime in the near future, but President Truman's inability to find someone who will agree to become Economic Stabilization Administrator is holding up the machinery for such controls.

Even after an Administrator is appointed it will take some time to get a plan for price controls organized, it is pointed out.

Predictions of and demand for controls came from diverse sources last week. Dr. Edwin G. Nourse, former chairman of the Council of Economic Advisers, and generally rated as a conservative, told the Producers Council that economic controls of wartime proportions—except on wages—will be imposed soon after the November elections "if not before."

Controls that try to go "selectively, timidly, and sentimentally into the delicate machinery of the price system, including wages and profits, will disorganize production and disrupt markets," he said in an advocacy of all-out controls.

Chester Bowles, former OPA administrator who has talked with the President recently, said that there would be a rollback in prices despite the Korean victory, and that stabilization of wages would probably follow later.

Bendix Ups Prices 7% On 4 Washers, Ironer

SOUTH BEND, Ind.—Bendix Home Appliances, Inc., has increased the prices of five of its models approximately 7%.

Washer prices were raised as follows: Dialamatic, up \$10 to \$179.95; Economat, up \$20 to \$219.95; B212, up \$20 to \$239.95; and G312, up \$20 each.

A \$20 increase was made in the price of the deluxe ironer. The price of the clothes drier remains unchanged.

WASHINGTON, D. C.—A total of 55 firms in the refrigeration field will exhibit products of particular interest to the dairy industry at the 17th annual Dairy Industries Exposition to be staged in convention hall in Atlantic City from Oct. 16 through Oct. 21.

They are part of a final list of some 350 exhibitors released by the Dairy Industries Supply Association, Inc. here recently.

The exposition is claimed to be the largest ever assembled by the dairy industry and the largest industrial show ever staged in Atlantic City's convention hall.

The exposition will open at 10 a.m. Monday morning and will close at 6 p.m. Opening hour will be the same every day of the week. Closing hour will be 6 p.m. daily except on Wednesday when it will be 10 p.m. and Saturday when the show will close completely at 1 p.m.

Admission to the exposition will be by badge only. The general public will not get an opportunity to witness the show. Registration begins on Sunday, Oct. 15.

The Dairy Industries Supply Association (Concluded on Page 2, Column 2)

Refrigerator Prices Increased by I-H

CHICAGO—International Harvester has announced price increases ranging from \$10 to \$20 on its six models of refrigerators, effective immediately. Prices of the company's 7-cu. ft. models were increased \$10 each and the 8 and 9-cu. ft. models, \$20 each.

The upward price adjustment of Harvester's refrigerators follows price increases on its other lines which averaged 6.4%, most of which went into effect on Sept. 1. Home

(Concluded on Page 4, Column 5)

Priorities Plan Makes Defense Work a 'Must'

Plants Must Fill All Priority Orders First; Will Hit Metal Users.

WASHINGTON, D. C.—A new priorities system designed to make sure that defense production has first call on the nation's production capacity was put into effect Oct. 3 by the National Production Authority.

Under this priorities system the Department of Defense and the Atomic Energy Commission will get first call on the country's industrial production. The regulation directs all plants to accept and fill any order bearing the priority rating ahead of civilian demands.

It is felt that production of refrigerators, home freezers, commercial refrigeration and air conditioning equipment, and major appliances, will be definitely affected when the impact of full-scale military buying begins to be felt.

And some businessmen believe that the priorities order is a step on the road to all-out controls. One manufacturer, pointing out that the order will intensify the wild scramble for steel for non-military production said that the situation "is bound to wind up with all-out allocations."

The priorities symbol "DO"—meaning "defense order"—will be applied to such orders and orders so designated will override all others on hand.

The mandatory provisions of the "DO" orders will carry down from (Concluded on Back Page, Column 3)

Stiffer Reg. W Seen As Prices Climb

WASHINGTON, D. C.—Press services here this week reported that the Federal Reserve Board is definitely working on plans to stiffen consumer credit regulations.

As reported in the Oct. 2 issue of AIR CONDITIONING & REFRIGERATION NEWS, administration officials were said to be receiving considerable criticism to the effect that the recently announced new Regulation W terms were not stringent enough to hold down inflationary tendencies.

Best guess now is that on refrigerators, home freezers, room air conditioners, and major appliances, the down payment might be raised to 20% or possibly 25%, compared with the current requirement of 15%. Maximum time limits allowed for completion of payment on such items might be cut to 15 months, but there is a chance the present limit of 18 months might stay.

Heavier Excise Levies On Consumer Durables

WASHINGTON, D. C.—A recent speech by Roy Blough, one of President Truman's Council of Economic Advisers, indicates that there is a feeling in the administration that additional excise taxes on consumer durable goods items might be important in holding down inflationary tendencies.

Blough told the Tax Executives Institute that one way to get buying pressure off consumer goods made of materials in short supply would be to clamp heavy excises on them. He emphasized that he was talking about consumer goods that use steel, rubber, aluminum, and copper.

Admiral Refrigerator, Range Prices Boosted

CHICAGO—An increase in prices on its refrigerators and ranges, ranging from \$10 to \$30, was announced here recently by Admiral Corp.

Lee H. D. Baker, vice president in charge of the company's appliance division, said that the increase necessitated by rising materials costs.

Bobby Clark Joins Hope In Expanding TV Show Series for Frigidaire

DAYTON — Frigidaire has announced that it has expanded its national television program by continuing the popular Bob Hope shows and adding another star comedian, Bobby Clark, to a new monthly TV show series which started Oct. 1.

Approximately half of the Frigidaire series will be a continuation of the Bob Hope shows, similar to one telecast from New York on Sept. 14. Hope has made three TV appearances for Frigidaire.

Alternating with Hope will be a new revue type show starring Clark, who will appear for the first time on television. This show will be produced by Michael Todd, one of Broadway's most successful producers. Currently Todd is producing and Clark directing the comedy in the Broadway hit, "Peep Show."

Cigar-puffing Clark, whose painted spectacles have become classic, will make his actual TV debut on the opening program. Topping his cast will be motion picture star Joan Blondell and Sigmund Romberg, famed composer, conductor, and pianist, plus a sparkling Todd-styled girl revue.

Hope and Clark will each head a parade of top-flight stage, screen, radio, and TV stars who will participate in the new series of shows. The Frigidaire programs will be telecast over the NBC inter-connected network at 8 p.m. (EST) every fourth Sunday.

Rules Covering Dairy Show Attendance--

(Concluded from Page 1)

ciation has hard-and-fast rules about who may attend the Exposition. The Show is primarily for producers of dairy and ice cream products, but distributors and dealers (the DISA calls them "jobbers") in equipment manufactured for the dairy industry may attend under the rules of admission, set up as follows for guidance of exhibitors:

"You (exhibitor) may invite representatives of companies which job or distribute your products as displayed in your booth provided these jobbing companies manufacture no products used by milk dealers or dairy products manufacturers. Such representatives are admitted free.

"But if it develops that a company represented by a person admitted upon your invitation does manufacture products for use by dairy processors an admission fee will be collected for that person from you. If the invited person's company is a DISA member, \$24; if a non-DISA member, \$100. (Individual rulings will determine what extent of manufacturing by a primarily jobbing entity may constitute 'manufacture' within the sense of these regulations and hence require payment of an admission fee).

"Jobbers not invited by an exhibitor are charged a fee of \$25."

The following are the admission rules applying to non-exhibiting manufacturer representatives:

"Representatives of non-exhibiting companies that produce goods or services used by milk dealers or dairy products manufacturers are

admitted for a fee. Per person, if the company represented is a DISA member, \$25; if a non DISA member, \$100.

"But you may invite, without charge to them or to you, representatives of manufacturers whose products are distributed solely through your company and are on display in your booth. However, if it develops that the represented company does also distribute dairy industrial products through another exhibitor or a non-exhibitor, an admission fee becomes collectible from the inviting exhibitor of \$25 per person if the represented company is a DISA member and \$100 per person if the represented company is not a DISA member.

"One technical representative of a company (for which your company is not sole distributor) manufacturing goods exhibited in your booth or manufacturing parts which are incorporated in assembled or composite products of yours on display in your booth may be invited (if the Exposition Management believes his presence essential) without fee. But the standard \$25 or \$100 fees become collectible from you if this technical representative attempts to sell non-exhibited products."

Exhibits from the refrigeration industry will include both production and merchandising equipment. Typical exhibits will be a line of truck refrigeration units by Oldsmobile Co., refrigerated cabinets for storage and display by Ace Cabinet Co., and introduction of a new ice cream merchandiser by Savage Arms Corp.

Refrigeration Firms Exhibiting at Dairy Show Oct. 16-21

Exhibitors with displays of interest to the refrigeration industry will include:

COMPANY	BOOTH NO.
Ace Cabinet Corp.	254
Airtemp Div., Chrysler Corp.	1144
Amco Corp.	259
Anheuser-Busch, Inc.	1315
Arctic Vendor Sales Co.	1407
Armstrong Cork Co.	1264
Bastian-Blessing Co., Inc.	400
Batavia Body Co.	300
R. H. Bishop Co.	1510
Brown's Frosted Foods, Inc.	437
Brown Instrument Co.	1416
Cherry-Burrell Corp.	1120
Chicago Stainless Equipment Corp.	209
Coldmobile Co.	1200
Creamery Package Mfg. Co.	550
Dole Refrigerating Co.	1268
Eastern Dairy Equipment Co.	1524
Fischman Co.	409
Fogel Refrigerator Co.	1345
Foxboro Co.	1456
Freezer Box Div., Annapolis Yacht Yards	1241
Freezing Equipment Sales, Inc.	1620
Frick Co.	330
Frigidaire Div., General Motors Corp. Room A	1400
Grand Rapids Cabinet Co.	1432
Robert M. Green & Sons, Inc.	417
Ideal Dispenser Co.	226
International Harvester Co.	1400
E. A. Kaestner Co.	160
Kalva Corp.	204
King Zeero Co.	1260
Stanley Knight Corp.	1415
Kold-Hold Mfg. Co.	1237
Liquid Carbonic Corp.	613
Lynch Corp.	1300
Mojonnier Bros. Co.	Stage 2
Nash-Kelvinator Corp.	310
C. Nelson Mfg. Co.	207
Niagara Blower Co.	431
Phenix Soda Fountain Co., Inc.	332
Reco Products Div., Refrigeration Engineering Corp.	1310
Refrigeration Corp. of America	410
Savage Arms Corp.	331
Schaefer, Inc.	200
Sweden Freezer Mfg. Co.	1369
C. J. Tagliabue	464
Taylor Instrument Cos.	637
Emery Thompson Machine & Supply Co.	228
Tyler Fixture Corp.	419
Vendo Co.	1516
Vilter Mfg. Co.	224
Henry Vogt Machine Co., Inc.	465
Weber Showcase & Fixture Co., Inc.	309
Worthington Pump & Machinery Corp.	502
York Corp.	1455

Appliance Boom Continues In Chattanooga, Setting Even Higher Sales Records

CHATTANOOGA, Tenn.—Monthly sales records on major appliances sold by local appliance dealers collapsed during July, reports issued by the Electric Power Board of Chattanooga indicated recently.

New marks were set on refrigerators, home freezers, ranges, water heaters, clothes dryers, and dishwashers. Only appliance on which volume decreased was the vacuum cleaner.

July, 1950 sales, as compared with those of the same month last year, found dishwashers up 383%, clothes dryers up 300%, garbage disposers up 250%, water heaters up 208%, and ranges 102%. Less spectacular gains were scored by ironers up 80%, refrigerators 52%, home freezers 51%, and clothes washers 27%. Vacuum cleaner sales dropped 37%.

Set beside those of June, unit sales of clothes dryers jumped 240%, garbage disposers 133%, home freezers 84%, ranges 42%, ironers 34%, dishwashers 31%, clothes washers 29%, refrigerators 18%, and water heaters 2%. Vacuum cleaner sales declined 12%.

Unit sales of each appliance for July, along with average unit price, and total sales value were as follows:

Appliance	Unit Sales	Average Unit Price	Total Sales Value
Refrigerators	1,713	\$ 249	\$504,755
Home Freezers	144	424	61,164
Ranges	1,203	261	314,728
Water Heaters	522	131	68,648
Ironers	47	147	6,953
Vacuum Cleaners	381	71	27,279
Clothes Washers	834	185	155,082
Clothes Dryers	68	209	14,271
Dishwashers	29	318	9,244
Garbage Disposers	7	143	1,003
Water Conditioning Units	14	2,113	29,584
Refrigerators, Comm.	6	693	4,160
Freezing Cabinets	4	479	1,918
Beverage Coolers	44	213	9,391

Turner Construction Gets 2 Big Safeway Contracts

OAKLAND, Calif.—Construction contracts for two new distribution centers—one at Landover, Md., and the other at Kearny, N. J.—have been awarded by Safeway Stores, Inc. here to the Turner Construction Co.

At Landover, Safeway will erect seven one-story buildings with a total of 692,736 sq. ft. of floor space on a 50-acre tract.

At Kearny, it is building a 118,631 sq. ft. meat warehouse and a 112,000-sq. ft. produce warehouse on a 38-acre tract along the Pennsylvania railroad. Eventually the firm plans to develop a complete center here. The buildings will have a total of 664,000 sq. ft.

Greene also said a well-known drug chain has plans for a revolving store front.

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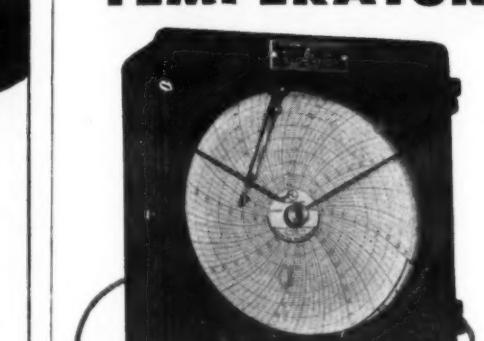
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Ice Cream Producers Convention Plans To Discuss Selling Tips

WASHINGTON, D. C.—Discussions of merchandising methods and problems, which will naturally involve the use of various kinds of refrigerated equipment, will have a large place in the program of the 46th annual convention of the International Association of Ice Cream Manufacturers, to be held Oct. 18-20 at the Hotel Baymore in Atlantic City.

The Dairy Industries Exposition will be held in the Atlantic City auditorium Oct. 16-21.

At the merchandising session on Thursday afternoon, Oct. 19, under the auspices of the Ice Cream Merchandising Institute, Inc., there will be forums on "Merchandising Ice Cream Through the Grocery Store and Supermarkets," led by Louis J. Wainer of Penn Dairies, Inc., Lancaster, Pa.; and Dan J. Ball, Beatrice Foods Co., Chicago; "Acceptance of the Half Gallon Package" by A. C. Kunkel, Breyer Ice Cream Co., Philadelphia; and "Who Sells Who?" led by William Barley, Donland's Dairy, Toronto; and Clarence Doyle, Acme Farmers Dairy, Toronto.

The Friday morning merchandising session will include discussions on "Increasing Bulk Ice Cream Sales" led by H. R. Scheid, Fenn Bros., Inc., Sioux Falls, S. D.; and "How Small an Account Is It Profitable to Serve?" led by V. F. Hovey, Jr., General Ice Cream Corp., Schenectady, N. Y.

Among the technical presentations will be "Plant Construction" by George Putnam of The Creamery Package Mfg. Co., at the Production and Laboratory Council session Thursday afternoon, Oct. 19; and "Progress in Control of Shrinkage" by Dr. C. D. Dahle, Pennsylvania State college, at the same session.

At the Friday morning session of the Council E. H. Forster of the Cherry-Burrell Corp. will talk on "Oil in Refrigerating Systems."

Kold-Pak, Inc. Files Bankruptcy Petition

LANSING, Mich.—A voluntary petition in bankruptcy has been filed in U. S. District Court, Detroit, by Kold-Pak, Inc., here, manufacturer of a small refrigerator.

The company listed liabilities totaling \$78,167, including \$65,158 in unsecured claims. Assets were listed as amounting to \$37,122, including \$359 cash on hand, \$121 in securities, \$35,620 stock in trade, and \$1,020 debts due on open accounts.

C. LaVerne Roberts, of Lansing, has been appointed receiver for the firm. Walter I. McKenzie is the referee.

Lopiccolo Adds Post of Bowser General Sales Mgr.

TERRYVILLE, Conn.—Thomas J. Lopiccolo, chief engineer of the refrigeration division of Bowser, Inc., here, has assumed the additional functions of general sales manager, coordinating all technical sales and application engineering, the company announced recently.

The company further announced that John Zaleski, a refrigeration engineer, has been appointed exclusive distributing agent for government sales for the division.

In addition, John Gelb, research engineer from Chicago, has joined the division as research and development engineer.

Air Conditioning Ordered for Safety Vaults at Mexican Bank

MEXICO CITY, Mexico—A new year-round air conditioning system for a safety deposit vault has been ordered by Banco de Mexico, S. A., the Mexican Government's official bank.

Equipment will consist of two Worthington 10-hp. "Freon-12" compressor units and two Worthington CL-131 shell and tube condensers.

The contractor for the job is Enrique Ramoneda and the distributor Calefaccion Central, S. A., Mexico City.

Wave of Food Poisoning Leads Health Official To Conclude--

Farmers Still Need More Education In Proper Use of Milk Coolers

WAUKEGAN, Ill.—Importance of refrigeration in helping prevent food spoilage and the spread of disease was outlined for the Illinois State RSES association at its annual convention here by James S. Meany of the Chicago Board of Health who told the group, "Your responsibility in maintaining refrigeration units in good operating condition is of high order.

"Our prime problem in the health department is to fight disease to keep it as low as possible. And it all starts with bacteria. The theory of bacteriology was discovered only 70 years ago.

3 TYPES OF BACTERIA

"To understand bacteria you might consider them as similar to people except in size. We have good citizens and we have good bacteria that are essential in many industries. Likewise we have 'indifferent' bacteria as with people, and then we have bandits and crooks among bacteria just as we have among human beings."

To show how dangerous the pathogenic types of bacteria can be, Meany cited a recent instance of 250 cases of typhoid in a tri-state area which resulted in 27 deaths, all de-

veloping in a three-week period because an 8-year-old typhoid carrier helped her father with the milking, the unpasteurized milk being made into cottage cheese.

"Bacteria," he went on, "like the same food we human beings do—mashed potatoes, gravy, cream fillings in desserts, but they only grow under certain optimum conditions. They must have a certain amount of moisture, they need food, and the temperature must not be extreme. Around 100° F., approximately body temperature, is ideal.

HOW TO STOP THEIR GROWTH

"There are three ways of stopping the growth of bacteria—heat, dehydration, or cooling, but cooling is the most practical way from an economic standpoint. So we in the health department want milk, for example, to be cooled just as soon as it's obtained from the cow.

"It should be remembered that cooling doesn't kill bacteria, but it is the first step in insuring a safe milk supply. Prime purpose of pasteurization, however, is to kill tubercular bacteria, which is most resistant to destruction of the pathogenic bacteria usually found in milk.

"Pasteurization doesn't destroy all the bacteria present in milk, including the lactic acid organism which causes milk to spoil. Thus, even though the disease-causing bacteria may be destroyed by pasteurization it is absolutely essential that the milk be kept under refrigeration to prevent spoilage."

Considerable education is still needed among farmers, he said, in the use of refrigeration to cool milk. Often, he said, even the farmer who has a milk cooler does not use it properly. He usually lets it run only an hour after the milk is placed in the machine, whereas he should keep the cooler running as long as there's milk in it.

"Most frequent cause of bad milk in summer is poor cooling, while in winter the trouble is usually poor clean-up," he added.

SPOILED PIE SABOTAGED WAR

To show the importance of refrigeration in preventing food spoilage, Meany described a near-tragic incident of World War II which occurred at the Chicago airport.

"A hush-hush secret meeting to be held at the airport restaurant had been called by the Armed Forces to work out strategic decisions with the

major airlines of the nation. The place was just filled with top brass. Shortly after eating, about two-thirds of those present became violently ill. Police, the FBI, intelligence, and we of the health department were rushed to the scene, the general thought being that this was the work of a saboteur.

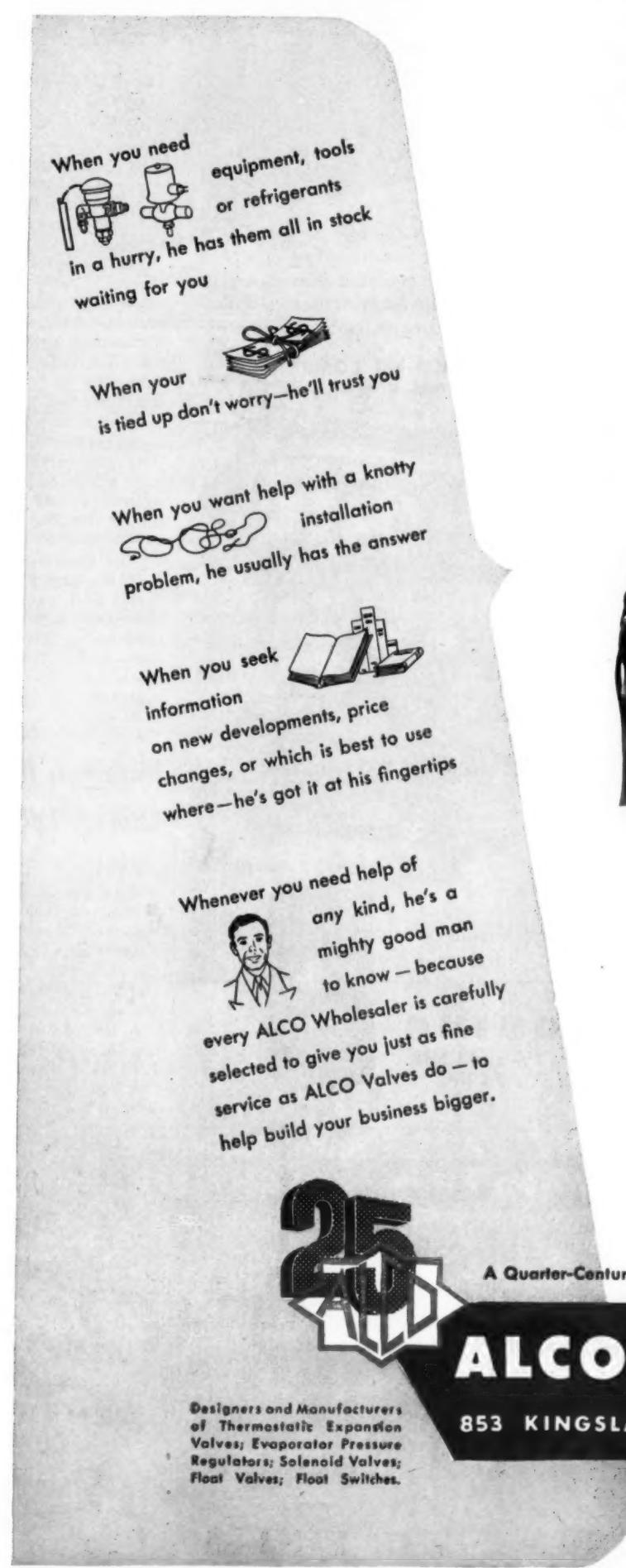
"Our investigation, however, revealed that those who were sick had eaten Boston cream pie for dessert. The pies had been made well ahead of time, but the chef hadn't put them in the refrigerator.

"It was thought perhaps someone who handled the pies had an infection, but because they weren't kept under refrigeration the bacteria were allowed to multiply to the danger point."

Central Service Supply Gets Bid To Furnish 18 Water Coolers

SYRACUSE, N. Y.—Central Service Supply was the successful bidder on the furnishing of 18 water coolers to Stewart Air Field, Newburgh, N. Y.

Models supplied were the Oasis OP 10 manufactured by the Ebco Mfg. Co.



Appeals Court Reverses Pennington Judgment

ST. LOUIS—The St. Louis Court of Appeals has reversed the judgement of a circuit court which granted a judgement of \$12,500 to B. R. Davidson, head of Thermorite Corp. here, in a defamation of character suit against Raymond J. Pennington and Joel Montgomery.

The court of appeals said that the case against Pennington and Montgomery had been predicated on the theory that the two men had falsely testified before the grand jury, but that absolute proof of this charge was lacking.

Carnegie-Illinois Wins Customer Support In Move To Prevent Steel Gray Mkt.

PITTSBURGH—A series of controls put into effect by Carnegie-Illinois Steel Co. in an effort to prevent resale of steel in the gray market has been endorsed by the firm's customers, according to J. Douglas Darby, vice president in charge of sales.

The controls include insertion of new clauses in sales contracts and letters of acknowledgement written in connection with orders. Here is a typical clause:

"This sale is made upon the ex-

press condition that the products shall not be diverted or reconsigned in transit unless authorized by the seller, and bills of lading shall be endorsed pursuant to agreement between consignor and buyer of products which are covered by this bill of lading.

"If buyer resells any of the products prior to processing the same without first offering such products to seller at cost of acquisition, seller may cancel deliveries of any ordered but undelivered products."

Sneltjes To Supervise Advertising, Promotion For G-E Conditioning

BLOOMFIELD, N. J.—W. L. Sneltjes has been appointed supervisor, advertising and sales promotion, for the General Electric Co.'s air conditioning department, it was announced recently by G. W. Hart, manager of advertising. Sneltjes succeeds Fred Keswick who has recently joined the advertising staff of the appliance and merchandise department at Bridgeport, Conn.

Sneltjes will supervise advertising and sales promotion of G-E automatic heating equipment, the G-E Air-Wall heating system, and residential year-round air conditioning.

Prior to his appointment, Sneltjes was advertising and sales promotion manager of the Williams Oil-O-Matic heating division, Eureka-Williams Corp.

A native of Chicago, Sneltjes attended the Chicago Technical college, studying air conditioning and refrigeration. Later he attended the Chicago Central college and the Augustana college at Rock Island, Ill., studying business administration.

Prior and during World War II, Sneltjes spent five years at the Rock Island Arsenal as supervisory instructor of the Army Ordnance Anti-Aircraft Schools and later joined the Army Ordnance.

Marvel Industries Sells 5-Year Service Plan To Purchasers for \$5

STURGIS, Mich.—A five-year protection plan on mechanical parts is now offered to buyers of Marvel refrigerators at an additional cost of \$5, Marvel Industries, Inc. here, producer of Marvel refrigerators, has announced.

The offer applies to both the Marvel "400" refrigerator for conventional home use, and also to Marvel refrigerators designed for trailer use, and the Marvel combination ice-and-electric household refrigerator.

All Marvel refrigerators carry an unconditional one-year guarantee with a guarantee certificate in each unit. With the certificate is a registration card which the purchaser fills in and returns to the factory. This entitles him to Marvel field service anywhere within the limits of the continental United States.

If the purchaser wants the additional four years protection plan, he indicates that on the registration card and sends in the \$5 to the factory, which then mails out an identification card explaining the type of warranty to which the owner is entitled.

Michigan ASHVE To Hear Charles Leopold Oct. 16

DETROIT—Charles S. Leopold, widely known air conditioning consulting engineer of Philadelphia, will discuss "Internal Energy Release Effects In Conventional and Panel Cooling Systems" (or "Why Under-Capacity Jobs Sometimes Work") at the first meeting of the Michigan chapter, American Society of Heating & Ventilating Engineers, to be held at 8 p.m., Monday, Oct. 16, at the Rackham Bldg. Dinner will be at 6:30 p.m.

5 Named to Refrigeration Board In Grand Rapids

GRAND RAPIDS, Mich.—Five air conditioning engineers were appointed by Mayor Paul F. Goebel to the municipal board of refrigeration examiners recently.

The engineers were Vor Udell and Don Williams, commercial and industrial installers; E. A. Frey, general engineer; H. R. McGrath, commercial engineer, and Cecil Simpson, household installation chief for a local utility. The appointments expire May 1, 1951.

The board passes upon qualifications of contractors seeking licenses to do mechanical refrigeration work in the city.

I-H Ups Refrigerators--

(Concluded from Page 1, Column 4) freezers were increased an average of 5.6% on Sept. 11.

The company stated that sharp increases in the cost of materials and labor had made the upward price adjustments necessary.

The new and old suggested list prices of International Harvester refrigerators are:

Model	New Price	Old Price
U-76	\$209.95	\$199.95
H-74	224.95	214.95
U-87	259.95	239.95
U-95	279.95	259.95
H-84	319.95	299.95
H-92	359.95	339.95

The new and old suggested list prices of International Harvester freezers are:

Model	New Price	Old Price
70	\$254.95	\$229.95
111	399.95	379.75
158	479.95	459.75

2 Additional Dividends Declared by Artkraft

LIMA, Ohio—Directors of Artkraft Mfg. Corp., manufacturer of domestic refrigerators and freezers for the private brand trade, bottle coolers, and dealer signs, have announced that two additional five-cent dividends are being paid on common stock this year.

The first was paid Sept. 28 on stock of record Sept. 20, and the second will be issued on Dec. 20 on stock of record Dec. 8. A similar dividend was paid last January.

In making the announcement, President-Treasurer Morton L. Clark stated that volume during the first six months of 1950 was more than double that of the corresponding period last year and that the half-year just passed was the most successful, both volume and profit-wise, in the history of the company.

Admiral Prices Rise--

(Concluded from Page 1, Column 5) increases granted in the industry.

Following is the company's national retail price list, showing former and present prices of the units:

Refrigerator Model	Former	Present
750	\$189.95	\$199.95
760	214.95	229.95
960	229.95	249.95
970	249.95	269.95
1160	279.95	299.95
1170	299.95	319.95
1470	339.95	369.95
1090	399.95	429.95
1390	449.95	479.95

Range Model	Former	Present
204	149.95	159.95
360	169.95	179.95
T-1	249.95	269.95
T-2	289.95	319.95
T1-2	299.95	329.95
T-3	349.95	379.95

Toastmaster Increase Is First In 2 Years

CHICAGO—First price increases in two years on Toastmaster products were announced recently by the Toastmaster Products Div. of the McGraw Electric Co. here.

List price of the Toastmaster toaster was raised from \$21.50 to \$23, the Hospitality set from \$32.50 to \$34, the Toast 'n Jam set from \$27.75 to \$29.95, the waffle baker from \$18.95 to \$19.95, and the waffle set from \$27.50 to \$29.50.



REFRIGERATION helps you serve better

Your Good Name and Ours
could form
a profitable
partnership



aggressive refrigeration equipment dealers who have missed the important details of what we may be able to contribute to their efforts toward securing more profitable business.

If you are at all concerned in the sale or installation of refrigeration and air conditioning equipment, Brunner has a story to tell that you should at least know about. A factory representative will call without obligation. Write us and say when.

BRUNNER MANUFACTURING COMPANY
UTICA 1, NEW YORK, U. S. A.

Talk to anyone in the trade who has sold or installed Brunner Refrigeration Condensing Units and they'll tell you from experience what it means in business dollars and cents to deal with a progressive, understanding organization that builds its products just a little bit better than is expected.

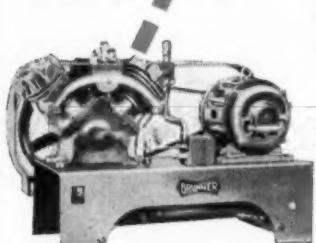
As a distributor or dealer, you need not be told how much easier it is to "sell" a job when you are in a position to specify and deliver known and accepted equipment.

The Brunner Manufacturing Company, with all their 44 years continual growth, has moved ahead so fast these past few years there are still some

REFRIGERATION CONDENSING UNITS

...a size and type
for every purpose

AIR AND WATER
COOLED MODELS
1/4 HP. to 75 HP.



BRUNNER SINCE 1906

AIR CONDITIONING

Self Contained Units in 4 sizes: 3-5-7½ and 10 HP.
Remote Installation Types from 5 to 75 HP.

WALK-INS • ICE CUBE MAKERS • REACH-INS

A Bottle Cooler That
Means Business...

UNITED DRY KOOL BOTTLE COOLER

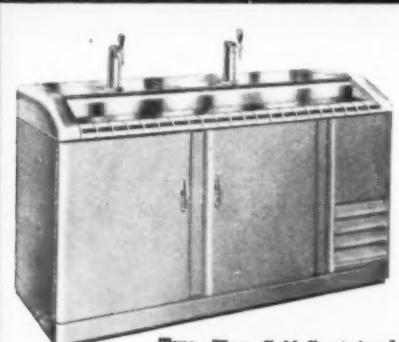
A proven profit-maker available in BROWN DULUX or STAINLESS STEEL in 4', 6', 8' and 10' lengths—remote or plug-in. United's original forced air system insures maximum air circulation and faster cooling with large capacity blowers under each door and coils that are up and out of the way.

- ✓ Streamline heavily insulated all steel cabinets.
- ✓ Stainless steel Lift-A-Way doors with roller bearings—"No busted fingers."
- ✓ Flush bottle decappers.
- ✓ More capacity per cubic foot.

"SELL United AND YOU SELL THE FINEST"

• DIRECT DRAW SYSTEMS • BOTTLE COOLERS

FREEZERS



Two Meg Self-Contained

United

REFRIGERATOR
COMPANY
LOCUST & WALNUT ST.
HUDSON, WISC.

NCRSA Convention--*(Concluded from Page 1)*

Participate in this phase of the program include A. B. Biddle, general sales manager, Hussmann Refrigeration, Inc.; Robert L. Tyler, president, Tyler Fixture Corp.; J. L. Kaufhold, general sales manager, Weber Showcase & Fixture Co., Inc.; and C. K. Hartman, vice president, Koch Refrigerators.

The distributor section of the panel will consist of Barnett Berch, president, The Schultz Co., Long Island City, N. Y.; I. W. Shell, president, the Shell Co., Chicago; and several other distributors to be announced later.

President C. S. White, Modernized Equipment Co., Cincinnati, will open the meeting by reviewing the association's activities during the past year and outlining the opportunities ahead.

C. V. Hill, Jr., vice president of C. V. Hill Co., Inc., will address the convention on "The Manufacturer's Role In Bringing About Greater Sales."

Other speakers for the Monday morning session will be Russ Maintain, president of Maintain Store Engineering Service, Boston, and immediate past president of the association; and NCRSA's vice president, I. Rosenberg, Jr., Refrigeration Equipment Co., Pittsburgh.

Maintain will speak on "How a Complete Line of Store Fixtures Aids the Sale of Commercial Refrigeration Equipment." The title of Rosenberg's talk is "Let's Hold On to What We Have."

On Tuesday morning, the convention will hear F. C. Clarke, E. I. du Pont de Nemours & Co., Inc., speak on "How Pre-Packaging Sells." Also speaking at this session will be James A. Horton, director of the Bureau of Industry Cooperation, Federal Trade Commission. He has chosen as his topic "Trade Practice Conference Procedures."

The program includes several additional subjects of interest to distributors of commercial refrigeration equipment. They will be discussed by speakers to be announced later.

The annual banquet for members and guests has been set for Monday evening. James E. Gheen, inspirational and humorous speaker, will present an informal talk.

The annual meeting and dinner of the association's board of directors will be held at the Astor on Sunday evening, Oct. 15.

The association said indications point to a large attendance at the convention, especially since those attending will have an opportunity to visit the dairy show in Atlantic City later in the week. An invitation to come to the meeting has been extended by the association to all interested manufacturers and distributors.

In releasing details on the convention, the association also reported that three companies recently became members. They are Bodner-Shames, Inc., Norfolk, Va.; Lancaster Equipment Co., Birmingham, Ala.; and Miller & Seddon Co., Inc., Cambridge, Mass.

Well Water Gets Hotter, Store Gets More Cooling

CANTON, Ohio—A 100-hp. condensing unit was installed recently in Stark's Department Store here to boost cooling previously handled by well water for a central system.

Additional refrigeration was necessary because the well water's temperature has risen from 52° F. to 60° F. in the past few years. The well water is now used to pre-cool the air and for the condenser of the Worthington unit.

The distributor involved was Avery Engineering Co., Cleveland.

Fire Hits Coast Firm's Branch But Doesn't Halt Operations

PORTLAND, Ore.—A fire starting in an adjacent store severely damaged the Portland branch of Refrigerator & Power Specialties Co. of San Francisco on Sept. 22, the company announced recently.

It was said the damage was fully covered by insurance. Operations were temporarily moved across the street and business continued as usual. Stocks of merchandise were transferred from the company's four other stores to Portland to replenish those lost in the fire.

Survey Finds 1 Out of 4 Restaurants Watch Volume Decline Without Acting

CHICAGO—Competition for the consumer's dollar is hitting the restaurant business, yet one out of four restaurant executives says he is doing nothing to increase business.

So declared a recent report by the National Restaurant Association based on two nationwide surveys—one of the general public and one among restaurant proprietors and managers in all types of eating places. The surveys were made by the Opinion Research Corp. of Princeton, N. J.

According to the NRA report, 55% of restaurant men interviewed said business was not as good as last year

and 22% said it was about the same. Only 16% said it was better while 7% were undecided.

"Even more to the point," the report said, "the largest proportion of restaurant men who are doing nothing to increase business is found among those who say business is worse than last year."

"The enterprising restaurant man is not so conscious of declining volume."

As an indication to what patrons look for when they select a place to eat, the survey of the general public found that they want good food first of all.

They not only want the food to be appetizing, wholesome, and tastefully served, but they want a variety of choice and adequate portions.

Once good food is assured, they look next for a pleasant atmosphere. That means the restaurant must be relaxing, quiet, attractive, and comfortable.

Other desirable characteristics of a choice restaurant are good service and cleanliness.

The report notes that both restaurant men and the public agree on these points, but that atmosphere is more important to patrons—especially to women—than realized.

One of the major targets of criticism by patrons is the irritating atmosphere of the restaurant. This criticism may range anywhere from annoyance with the lighting and kitchen noises to the type of music that is played.

Of the three out of four restaurant men who are trying to do something about declining business, many were remodeling or redecorating their establishments, installing air conditioning, or adding television or other entertainment.

Israel's Only Ice Cream Shop Has Standing Room Only

TEL AVIV, Israel—Cold ice cream is "hot stuff" in this country, an enterprising young Jewish immigrant from New York has discovered.

Every day from 10 a.m. to midnight, thousands of Israelis flock to his American-style ice cream shop here. The shop—called "The Penguin"—is the only place in the whole country where milk shakes and ice cream sodas can be purchased.



is FIRST AGAIN with

a NEW refrigeration method

that CUTS your customer's costs and BUILDS extra profits for you

Here is a new refrigeration idea that is hotter than a firecracker . . . that offers new sales possibilities and new profits for you. The new Sherer line of open self-service display cases gives your customers unheard of economies. They maintain perfect temperatures using only a $\frac{1}{2}$ H.P. condensing unit. Look at the sales advantages this gives you.

NEW SAVINGS IN H.P. REQUIREMENTS

A new scientific coiling system* controls and regulates the air flow through the case to eliminate spillage. Cooled air is recirculated without loss. Constant food-preserving temperatures are now maintained with a $\frac{1}{2}$ H.P. Condensing Unit (in a 90° room) instead of usual $\frac{1}{4}$ to $1\frac{1}{2}$ H.P. Unit. This means savings in initial cost and savings in electricity up to 30%.

LESS RUNNING TIME

Even with a $\frac{1}{2}$ H.P. condensing unit, far less running time is necessary to operate Sherer cases with this amazing new coil

ing system thereby effecting additional savings in electrical costs and less machine wear.

ATOMIZED AIR WITH DIRECTIONAL FLOW ELIMINATES PRODUCT WASTE

Crisp, cold air with proper moisture content is continuously circulated over, under and around all merchandise. This eliminates shrinkage and waste and increases the "buy-me" appeal of the contents.

ADD THIS TO THE TIME-TESTED ADVANTAGES OF SHERER CASES

Sherer products have long been known for eye-appealing design, profit-building display and dependable construction. Their inherent quality helps to build dealer reputations. They have a competitive price and a profit-making mark-up. That's why it pays to be a Sherer Dealer.

Investigate the important money-making features of the COMPLETE Sherer line.



SHERER-GILLET COMPANY MARSHALL, MICHIGAN

Lockers & Freezers: They Help Promote Each Other Is Opinion of Plant Operators

By C. Dale Mericle

CHICAGO—"Operating a locker plant without selling home freezers is like trying to be an automobile dealer without having a service department" was the way one successful locker plant operator summed up his views at a clinic on home freezers held during the National Frozen Food Locker Convention at the Palmer House here recently.

In fact, this operator—Lott Lawson of Columbia, S. C.—goes considerably farther than simply selling freezers. He has a full-line General Electric appliance franchise, and he urges other locker operators to sell appliances, too.

Big Profit on Freezers

It is Lawson's contention that "you can sell a freezer, for example, with the same effort it takes to rent a locker to a patron, and the profits on the freezer are much higher."

"Besides, anyone who owns a home freezer consumes four times as much frozen foods, and if you educate them right you'll have them renting two lockers at your plant inside of six months."

"Freezers are only the beginning, too. If I could sell 1,000 freezers I'd make three times as much money as by renting 1,000 lockers."

That Lawson is more interested in appliances now than lockers is likewise indicated by his statement that "originally we had 1,700 lockers in a room built for 2,000, but we've taken 1,200 out. We want to keep around 500 lockers and use the other for cold storage. City folk don't want lockers anyway."

Problems Are Local

"However," he cautioned, "each locality must solve its own problems, but I'm getting out of the large locker operation myself."

This doesn't mean that Lawson has lost interest in lockers, but rather that he sees them as being a part rather than the whole of his business operation. As a matter of fact, he indicated that having a locker plant provides a good means of obtaining floor traffic in his store and helps in making sales.

"If we as locker men maintain and sell high quality food, then the patron should have a good refrigerator and a good range at home, so this food can be properly prepared to maintain that good quality we originally provided. It's up to us to see that the patron does have good appliances at home and knows how to use them properly."

Two-Price Plan Discussed

The question that brought Lawson into the discussion at this clinic, however, was whether a locker plant should charge higher processing rates of those patrons having only a home freezer than the locker renters were charged. Lawson does just that, as do some other operators, it developed.

"We had charged .5 cents and 7 cents a lb. for beef. [5 cents for

locker renters, 7 cents for others] and then just three weeks ago we raised these prices to 7 cents and 9 cents. This must have given us plenty of free advertising because we've had more processing than ever before since we raised the prices," Lawson declared. "Apparently home unit customers figure that locker plants must really have something if they charge that much."

In this connection another operator—Dan Laurence of Sanford, N. C.—who served as moderator of the clinic said that he charges locker renters 3 cents a lb. and home freezer owners having no locker 4 cents.

Difference Is Justified

"We think this difference in charges is justified," he explained, "because we usually have to store the home unit patron's food for two or three weeks after it's processed. If the patron has a locker rented in our plant we can simply put the

food in the locker after it's been processed. It costs more to handle the food for the home unit patron."

Most of the locker operators present at the clinic, however, did not differentiate between such users in their processing charges, the consensus being that they were "afraid this would drive away potential locker renters."

There was no complete agreement either as to whether the locker plant should sell or rent lockers, but several of the apparently more successful operators indicated they were doing just that. There is, however, another way to handle the problem, Dan Laurence explained.

"We work closely with appliance dealers, and today we're all telling the same story. Now appliance dealers assure us that they couldn't sell freezers without the help of the locker plant."

"For the past two years we've held frozen food fairs at our locker plant and have attracted 500 visitors to

each one. Eleven dealers selling home freezers displayed units in our plant and out on the lawn, and they said they were very happy to come down and display their units because they could talk to so many people. We were also helped by the state college extension service."

Close cooperation with appliance dealers was cited also by Marion Sargeant, Nebraska operator, who has likewise staged frozen food fairs in cooperation with local appliance dealers.

Can Processing Cover Loss?

"While we have lost locker customers," he says, "due to home units, we have also gained locker customers through the home unit. The problem is whether we can get enough in processing to overcome the loss of rentals. But I don't think a locker man should be in the appliance business."

"However, when appliance dealers were having trouble selling the larger home freezers we tried to promote the sale of small units. I contend that the consumer can have a small freezer at home and rent a locker for

less than the depreciation on a large home freezer."

"A home unit does offer a big advantage," he admits, "in that the owner always has frozen food at home, and furthermore, people with home units are much better customers for our processing and commercially frozen foods. We do know that home units will sell and we locker operators must realize that the time is coming when home freezers will be as widely used as refrigerators are today."

Freezer Would Protect Food from Atomic Attack

ALBANY, N. Y.—Food stored in home freezers and other low temperature units would be relatively safe in event of an atomic attack, if the freezer units were not broken in the blast.

This was the report of Dr. Simon Kinsman of the U. S. Public Health Service, who addressed officials of eight states gathered here to study food problems that would face them in atomic warfare.

More and More Dealers SIGN Deepfreeze FRANCHISES!

You'll want these selling advantages
in the appliance line you sell!

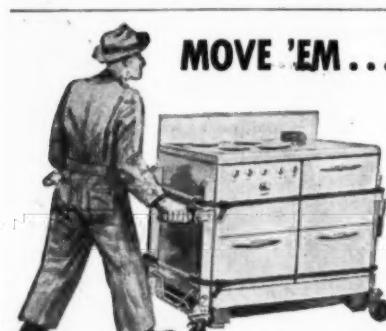
1. Consumer recognition and respect of "Deepfreeze"—one of the most famous names in the appliance industry! This name won consumer confidence through home freezer fame. It is winning even greater acceptance with high quality and top performance in three new appliances—Deepfreeze Refrigerators, Deepfreeze Electric Ranges and Deepfreeze Electric Water Heaters.

2. Deepfreeze is rapidly becoming the specialist in the four great appliance lines it now offers Deepfreeze dealers. Record sales for 1950 prove it! American homemakers find exclusive features they want most in new improved models. There are Deepfreeze models in every line—to fit every family's needs.



3. Deepfreeze appliance advertising in leading national magazines is one of the industry's greatest campaigns! 68,000,000 sales messages are at work in full page and half page ads—in full color and black-and-white! This great national advertising program is backed by the most complete array of sales promotion and sales training aids offered by any appliance manufacturer!

4. These, plus many more profit advantages, are the franchise features appliance dealers need to grow and build greater profits. That's why more and more dealers are signing the Deepfreeze Franchise! It is just the franchise you need. See your Deepfreeze Distributor for details.



Easily, Safely, Quickly
with
**ROLL-OR-KARI
DUAL TRUCKS**

Handling stoves, refrigerators, freezers and other heavy, awkward loads is a cinch with Roll-Or-Kari Dual Trucks. Adjustable to any size load, Roll-O-Kari Trucks with the patented Step-On-Lift and Web Lock and Tightener are easy to attach and easy to roll. Foot lever on each truck raises truck to rolling position. Folding handles. Capacity 1,000 lbs. Shipping weight 40 lbs.

Be thrifty in '50—Roll-Or-Kari Dual Trucks are your insurance against time losses and breakage losses. Write today for full information. Dept. A.

ROLL-OR-KARI CO.
MANUFACTURERS
ZUMBROTA - MINN.

Only 4 of 72 Units Returned

Dealer Finds Renting Freezers for Test Period Sells Most 'On Fence' Prospects

PHILADELPHIA—It is just as easy to cajole home freezer prospect into renting a unit over a test period as to loan it out—and the chances of sales are much multiplied, according to W. Wittenmeyer, head of Sanatoga Radio Co. here.

Wittenmeyer encourages "on the fence" prospects to rent a freezer and try it out over a 6-month period longer at home. If the prospect does not buy, the rental income is more than adequate to pay the cost of drayage, any scuff or marks which might have occurred, plus all other expenses.

"We hit upon this plan by accident," Wittenmeyer said. "A few months after home freezers were first introduced in our store, we had a prospect, obviously able to pay for a box, highly interested, but unsure as to its performance.

"When he proposed that we rent it to him, charging him enough rental rate that neither party would lose by the transaction, we poo-pooed the idea. However, after thinking it over, I agreed to the proposition, the home freezer was delivered, and within three months, the customer purchased.

"Since that first time, we have rented out some 72 home freezers in all price brackets, and of this number, only four have been returned. The four returned were for such reasons as husbands called into military service, divorces, or the family moving away."

Ever since that time, Sanatoga has run regular newspaper advertisements, headed with the simple slogan "Rent a home freezer. Low rates." When a prospective renter calls in, he is informed that he may select

all but a few boxes on the floor, pay \$10 down to cover handling costs, and \$5 a month rental thereafter.

As an accelerative clause, the store insists that the customer may apply all of his first six months rental payments against the purchase price of the home freezer, or, after six months, 50% of the total paid in can be applied. This, naturally, stimulates most renters to make up their minds to purchase the box and to do so before the expiration of the six months period, it was pointed out by Wittenmeyer.

30-Day Thor Drive Sells Record Number of Ironers

CHICAGO—Thor Corp. announced Sept. 26 that it has sold more "Glad-iron" ironing machines in the last six weeks than it had in the previous seven months as the result of a special 30-day price reduction of \$20 per unit to a price of \$79.50.

John R. Hurley, Thor's president, said also that distributor stocks, which were at a 30-day level on July 1 and 60 days on Jan. 1, have been reduced to a day-to-day basis.

Birds Eye Test Markets

Frozen Tomato Juice Concentrate In East

NEW YORK CITY—A concentrated tomato juice is being introduced in northeastern markets by the Birds Eye-Snider division of General Foods Corp., it was reported here recently.

Frozen tomato juice cocktail is expected to be introduced here for testing shortly by College Inn Food Products Co.

The tomato juice, flavored only with salt, is being sold in a 6-oz. can at 10 cents per can for the test marketing period. The regular price is expected to be 19 cents per can.

When reconstituted, the concentrate will make 24 oz. of tomato juice. The juice is said to have the tang of fresh tomatoes because it is not subject to heat during processing. It can be used as a beverage or in soups, sauces, gravies, and aspics. It is claimed not to separate when reconstituted.

Nov. 17 Deadline for Reg. W Registration; Forms Are Available

WASHINGTON, D. C.—Registration forms for businesses making instalment sales of any article listed in Regulation W are now available from local Federal Reserve banks or branches, the Federal Reserve Board announced recently.

There is no fee for such registration, but the forms must be filed with the nearest Federal Reserve bank or branch before Nov. 17, 1950.

For businesses which were not extending instalment credit on listed articles as of Sept. 18, but began extending it at a later date, registration forms must be filed within 60 days after that later date.

Each separate corporation or other legal entity must file a separate registration statement whether or not it is a subsidiary or affiliate with some other business.

In addition to the usual identifying information, the registration form asks for a summary of retail sales for the 12 months ended Sept. 30, 1950, showing the amount of cash and c.o.d. sales and of instalment or deferred payment plan sales.

It also asks for a summary of retail receivables owned—unpaid balances due from customers at the close of business on Sept. 30.

Some Contracts, Agreements Are Exempt from Reg. W

WASHINGTON, D. C.—Not only is any valid instalment sales contract or obligation entered into before Sept. 18 exempt from Regulation W, but any valid commitment made in good faith before Sept. 18 to extend credit after Sept. 18 exempts that credit from the terms of Regulation W, the Federal Reserve Board ruled recently.

The test of the validity of such a commitment is whether the party seeking the credit could maintain a suit for damages if the credit had not been granted, the board declared.

Substance and good faith rather than technicalities and formalities will control whether such a commitment is valid, the board said.

It is noted that a contract to sell or even a sale for future delivery is not necessarily an agreement to extend credit. There must have been a valid contract relating to the credit for the purchase of the listed article.

It added that there must have been a definite agreement to extend credit and reasonably exact agreement as to terms and amount. Written evidence of the commitment would strengthen the case but is not absolutely necessary.

Cory Resumes Output of Coffee Grinder Following Improvements

CHICAGO—Cory Corp. has resumed production of its electric coffee grinder, it was announced by N. H. Schlegel, vice president.

Output of the appliance was halted earlier this year so that mechanical improvements could be made.

Schlegel also revealed that the company has put its production for the balance of the year on an allocation basis. Output has been allocated to factory territorial managers, who are releasing quotas to each of their distributors.

Distributor Fills New Post

BUFFALO—R. R. Southwick has been appointed appliance sales manager of RCA Victor Distributing Corp., a newly created position. He will cover the Buffalo and Rochester districts for the company.

More and More Consumers BUY Deepfreeze APPLIANCES!

They Get More Features . . . More Value . . . More Satisfaction with Four "FAMOUS NAME" Products!

Deepfreeze has long been a household name for fine quality in home freezers. With America's first and finest home freezer Deepfreeze brings better, more economical living to thousands of American homemakers. Satisfied users know they get only the best quality, performance and value from products bearing the famous Deepfreeze name. Deepfreeze Refrigerators, Electric Ranges and Electric Water Heaters are consumer accepted! You are in a position to earn the steady profits of an enthusiastic consumer public when you sign the Deepfreeze Franchise! And there are many more advantages! For complete details, see your nearest Deepfreeze Distributor today.

★ ★ ★

Go Buy THE NAME...
Deepfreeze

HOME FREEZERS • REFRIGERATORS • ELECTRIC RANGES
ELECTRIC WATER HEATERS

★ ★ ★

Only the products of the Deepfreeze Appliance Division, Motor Products Corporation, North Chicago, Illinois, can carry the trade-mark **Deepfreeze** registered in the United States Patent Office.

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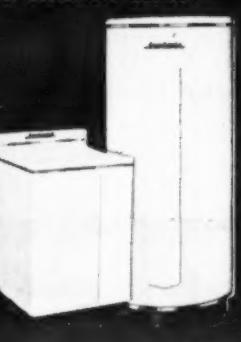
Home Freezers
... The industry's first and finest with larger capacities at the same low prices! 6 models; superior features!



Refrigerators
... 5 all-new models! The only refrigerator with the Deepfreeze Freezer Compartment! This feature means more sales!



Electric Ranges
... Where work ends automatically—and your sales begin! 5 all-new models... new features! It's your customers' choice!



Electric Water Heaters
... 14 all-new models! There's a Deepfreeze Water Heater for every home, every family's need. Best you can sell!

NOW!

See what the Franchise
with a Future will do for you Today!

Find out what Deepfreeze will do right now to help you sell. Have your Deepfreeze Distributor explain the Deepfreeze Franchise. Ask him about the national advertising program and the many practical selling aids available to Deepfreeze dealers. Don't delay—see your distributor—or write direct to Deepfreeze Appliance Division, Motor Products Corporation, North Chicago, Illinois.



M&E
EST. 1866

DIFFUSING TYPE UNIT HEATERS

FOR LOW PRESSURE STEAM & HOT WATER
60° Rounded front.
Easy to install and Service. Hand-somely finished.
Manufactured by **MERCHANT & EVANS CO.**
PHILADELPHIA 46, PA.



Leak In Muffler on Natural Gas Engine Fells 100, Causes Panic In Movie Theater

DETROIT—Carbon monoxide gas leaking from a badly rusted muffler on the natural gas engine driving an air conditioning compressor overcame 100 and indirectly injured a dozen more who were trampled when an audience of 500 fled in panic from the Lasky movie theater here on a recent Sunday evening.

"There seems to be no evidence, however, that the carbon monoxide gas was picked up and circulated by the air conditioning system," declared John Rehard, chief safety engineer of the City of Detroit, after carefully surveying the theater's system.

"Apparently the gas, which is heavier than air, filled up the basement levels, finally seeping through the floor and piling up on the stage where it rolled forward to catch those in the front rows. Of course, this is entirely a matter of conjecture on our part," he points out.

First victims, a mother and her three-year-old son, were taken from the theater about 9 p.m., two hours before the panic started, in the belief they were suffering from food poisoning. Later as persons began collapsing in their seats, the panic-stricken audience rushed for the exits, trampling several.

As they reached open air, many collapsed immediately. A large fleet of police squad cars, ambulances, fire department rescue trucks, and even passersby helped rush victims to three different hospitals in the vicinity.

In the meantime, the air conditioning plant has been shut off and sealed up by Detroit's Board of Health, and the theater owners have announced that an electric drive will be provided for the compressor.

Although Detroit has a broad

safety code on refrigeration and air conditioning, there is no provision covering the compressor drive. Electrical drives must meet requirements of the city's electrical code, and while the general building code covers some aspects of the gas lines into a building there is no section on exhaust.

Acting under provisions of other city ordinances, however, the Board of Health has made a preliminary ruling that either an exhaust system be installed for the machinery room as a whole or that an induced draft fan be provided for the engine exhaust itself. Idea in either case would be to insure positive exhaust of carbon monoxide out of doors.

"The logical solution," according to Rehard, "would be to place the muffler outside the building."

There are very few such gas-engine driven air conditioning systems in Detroit, but they are more widely used in some other parts of the country. In this connection Rehard emphasizes that there is another danger spot in this type of installation besides the muffler.

"The asbestos gaskets in the exhaust manifold and line connections

were leaking in the theater system, too, and these joints should be checked frequently. The constant expansion and contraction of the metal as the engine warms up during the 'on' cycle and cools during the 'off' cycle loosens these connections and causes leaks. These joints should be retightened regularly."

Frozen Juice Dispenser Replaces Orange Squeezer

BUFFALO—A new refrigerated frozen orange juice dispenser has been installed at the fountain of the Harvey & Carey Drug Store, Main and Chippewa Sts., here, and is reported to be far superior to the former system of squeezing out fresh oranges to take care of particular orders.

The new refrigerated dispenser is said to be "more economical," both in cost of juice to the store and in saving of clerk time. Customers are said to like the frozen juice just as well as the freshly squeezed juice.



HOT WEATHER FITTING: Clerks, children, and mothers find it easier with air conditioning.

* * *

Cooled Shop Makes Shoe Fitting Easier

PHILADELPHIA—Fitting shoes for children in hot weather often used to be a trying ordeal for everyone concerned at Mac Leeds Juvenile Shoe Shop here.

Heat made normally fidgety youngsters squirm more than ever. Many times, this irritated perspiring parents. The situation, in turn, severely tested the good humor of sweltering salesmen.

Installation of an air conditioning unit in the store, however, has changed this unfortunate picture considerably.

With temperature and humidity now maintained at comfortable levels, children are far less restless and both parents and salesmen far more relaxed. As a result, it is much easier to make a shoe fitting and a sale—and the shop has enjoyed a general increase in business at a time when sales formerly fell off, according to Albert Corr, who is manager.

The 5-ton General Electric unit is located in the rear storage area of the shop. Cool air comes into the sales area through ducts, with the outlets being located at the rear of the store near the ceiling.

Corr noted that some parents ask if the air conditioning will have an ill effect on their youngsters. He answers this question by pointing out that the temperature in the store is kept only eight or 10 degrees lower than that outside.

He advises those "afraid of a little cooling air" to be seated at the front of the store where it is the least cool.

Air conditioning of the shop has brought several benefits to employees, Corr said. They can now dress more neatly in summer, wearing jackets and ties if desired; they can take more "punishment" from youngsters; and the job of checking inventory is less distasteful in air conditioned surroundings.

The store, itself, has picked up a number of working man hours. Employees don't leave the store for cooling beverages every little while and they don't have to "wash up" as often, Corr declared.

In addition to air conditioning, the shop uses other methods in an effort to keep children contented. Tots are given comic books to read and such gifts as balloons, suckers, and miniature toys.

Even the walls and floor serve to keep the youngsters occupied. Storybook characters were painted on the walls, and the linoleum was formed into a hop-scotch game, numbers, and alphabet blocks and letters.

Chicago Air Conditioning Volume High This Year

CHICAGO—Air conditioning sales were unusually large in the Chicago area in spite of unfavorable weather and some shortage of equipment, according to H. E. Wheeler, president of Air Comfort Corp., installers of Carrier air conditioning equipment.

"Our contract department, which installs the heavier equipment, has closed over a million dollars in business this year, a new high for this department," Wheeler said. "As a celebration the sales department was taken to Syracuse to see Carrier's new factory."



ELECTRIC REFRIGERATION AND AIR CONDITIONING POWERED BY

TODAY, more and more manufacturers of refrigeration and air conditioning equipment are making important contributions to progress in the fields of food preservation and human health and comfort through the winning combination of their good products and Servel Supermetc condensing units.

Thirty years of technical skill and knowledge combined in these time-tested features are responsible for Supermetc's dependable, trouble-free field performance: HIGH-TORQUE, REFRIGERANT-COOLED MOTORS—start easily and smoothly—NO BELTS, PULLEYS, OR SEALS—eliminates troublesome mechanisms—FACTORY LUBRICATED—requires no manual oiling—LIGHTWEIGHT AND COMPACT—saves space, fits any fixture—NEW, SUPER-TOUGH BRONZE FINISH—resists rust and corrosion.

You get more than a condensing unit when you buy a Supermetc . . .

PROTECTION . . . Behind Supermetc's winning performance is Servel's positive, Five-Year Protection Plan.

Under this plan, covering all fractional-size Supermetcs, manufacturers are relieved of field replacement problems, customers are assured of protection and satisfaction. Customers deal quickly, conveniently, through local sales-service outlets, with near-by Servel authorized wholesale suppliers who carry complete stocks of parts and replacement units.

PLUS . . . Servel's staff of engineers assists manufacturers in planning production, assembly, or related problems. Servel's complete laboratory facilities are available to help test fixture products. Write, wire or phone Servel, Inc., Electric Refrigeration Division, Dept. A-101, Evansville 20, Indiana.

Servel Supermetc



Servel SUPERMETC
Models for every electric refrigeration and air conditioning use . . . 1/4 to 5 H.P.



OLD FASHIONED square dance party was sponsored by Barnes Woodin Co., Yakima, Wash. Kelvinator dealer, to build goodwill and promote appliance sales. Similar parties, which draw more than 100 guests, have been held throughout the Northwest region under the supervision of Walter R. Gunberg, zone manager for Kelvinator.



MODERN APPLIANCE demonstration, which was part of the party given for fruit farmers and their families, led to many sales. Hal Braiker (center) of Barnes Woodin, greets Gunberg prior to one of the appliance demonstrations. Miss Eleanore Wright, zone home economist, stands by.

Square Dance Provides Crowd for Demonstration

SEATTLE — Kelvinator dealers in the Northwest states have found that the appeal of an old-fashioned square dance can be used with telling effect to promote appliance sales.

Launched under the supervision of Walter R. Gunberg, Kelvinator's Seattle zone manager, a series of "square dance" parties sponsored by local dealers has resulted in many immediate major appliance sales and long lists of new rural prospects.

In the Yakima Valley region alone, according to Gunberg, 31 such parties have been scheduled. He said average attendance is more than 100.

Besides the square dancing, conducted by a professional "caller," the program includes a carefully-planned freezer demonstration by Miss Eleanore Wright, Seattle zone home economist, and a fast-moving presentation of Kelvinator's entire appliance line.

Universal Automatic Toaster Price Increased to \$21.95

NEW BRITAIN, Conn.—A \$2 increase in the price of its Universal automatic toaster has been announced by Landers, Frary & Clark. Effective Oct. 2, the toaster will carry a price of \$21.95.

It was the second price increase on the appliance in three months. The price was raised from \$18.85 to \$19.95 on July 1.

Lone Star To Be Astral Distributor In No. Texas

DALLAS — Appointment of Lone Star Wholesalers, Inc., as distributor in northern Texas for the diminutive Astral refrigerator was announced here recently by J. J. Shea, president.

Shea indicated that he would market the small unit through sporting goods outlets, office supply dealers, and medical supply stores as well as appliance and department stores.

MAKE IT A REAL PICKUP!



- SAVE TIME
- SAVE LABOR
- STOP ACCIDENTS

At half the cost of comparable loading equipment with VENCO the one-man loader

The Venco original tailgate loader really puts the "pickup" in your 1/2, 3/4 and 1 ton trucks. Then one man can handle heavy, bulky objects, such as refrigerators, in complete safety to merchandise and personnel.

• At your truck equipment dealer or write:

THE VEN CORP., DEPT. C
2828 NEWELL STREET, LOS ANGELES, CALIFORNIA

N.Y. BBB Cites Gain In Advertising Standards

NEW YORK CITY — Success in noticeably improving advertising and selling practices in the appliance, radio, and television industries in this city was claimed for the fair practice standards placed in effect here on July 15 by Hugh R. Jackson, president of the Better Business Bureau of New York City.

"The job is by no means completed," Jackson declared, "but considerable improvement has been apparent. With the continuing cooperation and support of all responsible elements we are confident that the present improved level of advertising accuracy can be maintained and exceeded in coming months."

Jackson explained that the bureau continuously analyzed all industry advertising, investigated consumer and trade complaints, examined questionable claims, and counseled with advertisers and merchants.

He noted particularly that such advertising terms as "up to \$75 trade-in allowance" have already been dropped completely. Other such vague terms are also on the wane, he indicated.

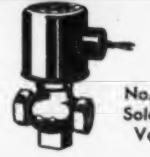
Burkhardt Gets Graves Post

ROCHESTER, N. Y.—William H. Burkhardt, who has been engaged in merchandising of furniture and appliances for the past 33 years, has been appointed general manager of the H. B. Graves Co., Inc., 78 State St., furniture and appliance store in Rochester.

DETROIT CERTIFIED VALVES and CONTROLS



No. 777 Thermostatic Expansion Valve



No. 683 Solenoid Valve



No. 450 FB3 Pressure Control

ONLY DETROIT
BRINGS YOU ALL 3

For One Convenient Source

Deal with Authorized DETROIT Wholesalers!

DETROIT

LUBRICATOR COMPANY

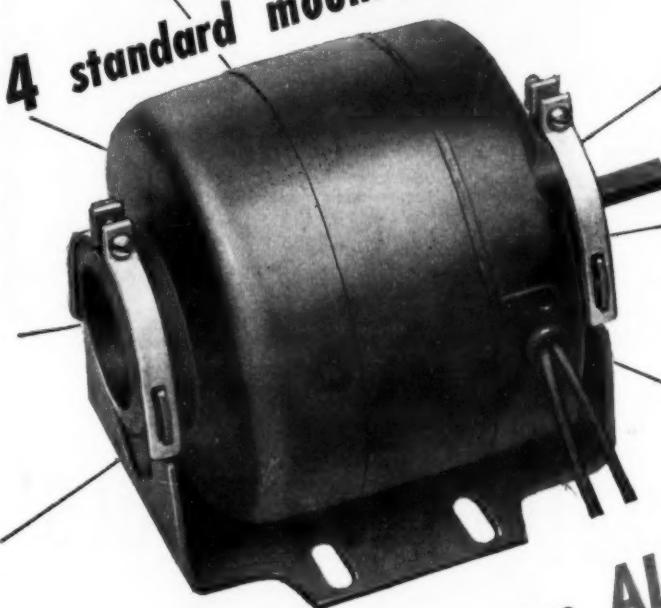
3900 TRUMBULL AVE.
DETROIT 8, MICHIGAN
Division of AMERICAN RADIATOR &
Standard Sanitary CORPORATION
Canadian Representatives: RAILWAY
& ENGINEERING SPECIALTIES, LTD.—
Montreal, Toronto, Winnipeg

DETROIT HEATING AND REFRIGERATION
CONTROLS • ENGINE SAFETY CONTROLS •
FLOAT VALVES AND OIL BURNER EQUIP-
MENT • DETROIT EXPANSION VALVES AND
REFRIGERATION ACCESSORIES • STATION-
ARY AND LOCOMOTIVE LUBRICATORS

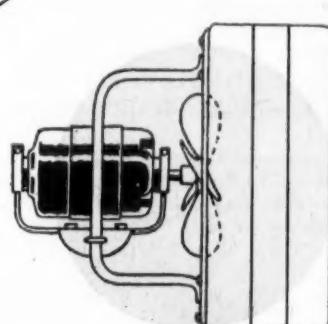
Serving home and industry AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS
DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TOWANDA INN

Choose your mountings

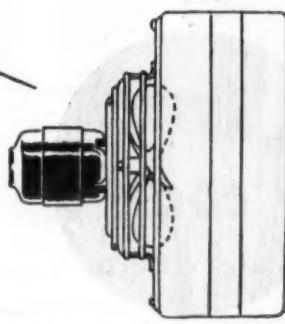
4 standard mountings



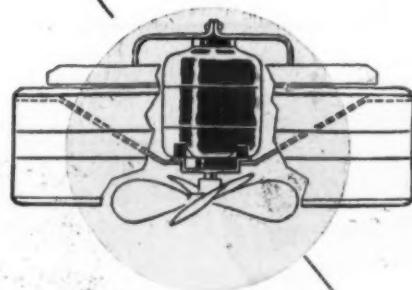
operates ALL ANGLES



RESILIENT-BASE MOUNTING



SHAFT-END MOUNTING*



RESILIENT-RING MOUNTING

G-E Unit-Bearing Motor

for your fans and blowers

Easy for you to mount—easy for your customers to like—this quiet-operating, lifetime-lubricated fractional-horsepower motor. Will operate in any position—especially designed for fans and blowers.

Sizes from 25 millihorsepower to 1/12 horsepower. Adjustable-speed operation possible with suitable control. Provision for easy mounting in any of these methods. More information on this long-lived motor in bulletin GEA-5338. Write now. Apparatus Dept., General Electric Company, Schenectady, N. Y.

*Opposite shaft-end mounting also available

GENERAL ELECTRIC



700-104

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

until he remarried in the fall of 1949. Interviewed on his honeymoon Cobb revealed:

"Joe Jackson of the underpaid White Sox was breathing down my neck one season. I liked Joe, and admired him. Every time we'd meet I encouraged him and was friendly. Joe was a simple fellow, and he appreciated my friendliness more than you might suppose.

"I was batting .383 for the Detroit Tigers and Jackson had a .391 average when the White Sox came to town for the last series of the season. I figured that if I could upset Joe's emotional processes I'd edge him out for the American League hitting crown.

"I met Jackson in the lobby of the Fort Shelby hotel. He stuck out his hand, and I turned on my heel.

"That unfriendly ignoring puzzled and worried 'Shoeless Joe' so badly that he struck out three times, grounded out twice, and popped an infield fly in the first two games of that series. In the last game I was friendly again, and Jackson was so bewildered he went 0-for-4. That did it, and I won the batting championship again.

"Jackson later grew a beard and played for the St. Joseph Prophets, they tell me."

Notorious 'Boners'

Larry Doby didn't help the Cleveland Indians' 1949 pennant chances a bit when, in a crucial game with the New York Yankees, he was thrown out at the plate in attempting to steal home. None were out at the time, the bases were full, Cleveland was four runs behind, and the New York pitcher was wild.

This colossal blunder reminded many old-timers of John Anderson's "boner" back in 1905. (And, so help us, John Anderson died shortly after Doby's foolish flee). All Anderson did was try to steal second with the bases filled. He was with Washington.

Twenty-one years later (Aug. 15, 1926, to be exact) Brooklyn was locked in a scoreless tie with the Boston Braves. On two singles and a hit batsman, Brooklyn loaded the bases. "Babe" Herman lofted a long fly to right field which the men on first and second figured might be caught. It wasn't: Both started belatedly—especially the man on second—and they slid into each other at third base. Getting up and dusting themselves off, they looked up bewilderedly. At that moment, Herman bowled them over again. Head down, he'd charged all the way around the sacks for his triple. Three men on third base!

In 1931, Lou Gehrig could have won the home run championship if it hadn't been for a comparably blind "boner."

Lyn Larry was on first when Gehrig homered in the spacious Washington park. Jogging leisurely around the path, Larry happened to look back when he neared third base. To his surprise he thought he saw outfielder Harry Rice of the Sena-

tors catch the ball. (Actually, the ball bounced back onto the playing field and Rice caught it on the rebound). That would have made the third out, so Larry didn't bother to circle the bases. He headed straight for the dugout, assisted by Manager Joe McCarthy.

When Gehrig reached third he was ruled "out" for passing a base-runner, and his homer was scored as a triple. After that, McCarthy never again coached at third base.

And They Paid Him \$20,000

Many of our finest ball players come from the hillbilly regions. And when they get up into the "big time," they are fascinated no end by what goes on in metropoli like New York, Chicago, and Philadelphia.

Ozark Okie, who sported a batting average of .519 in a southern minor league, was called up late in the season by the Brooklyn Dodgers. A representative of the Dodgers met him at Grand Central Station, and they walked leisurely together down Lexington Avenue to a hotel.

Young Mr. Okie was fascinated by many sights—the Chrysler Bldg., the bumper-to-bumper traffic, the gals—but a pitcher hawking giant balloons stopped him cold. He stood there at the corner of Lexington and 46th for several minutes, gazing enrapturedly at the four-foot long rubber balloons.

"Like those balloons, hey?" petted the Dodger emissary. "Okay, I'll buy you one."

"Druther you wouldn't, Mister," sighed Okie. "It's a party piece, but it's too big to get into my handbag."

Dark Horse

Alvin Dark made good in a hurry when he returned from World War II. With practically no minor league experience this war veteran keyed into the shortstop position in the Boston Braves infield almost at once. Not only did he become a regular. He starred.

Ted McGrew, talent scout for the Braves, was not surprised. He'd scouted Alvin Dark in high school and college (Louisiana) and was mighty high on the lad. Shortly before the 1948 Rookie of the Year donned a Marine uniform, McGrew signed him to a Braves contract.

Several months later owner Lou Perini of the Boston Braves told McGrew that he was ready to part with \$300,000 for Marty Marion, the St. Louis Cardinals shortstop.

"Don't do it, Boss," pled Ted. "I've got a kid who's better than Marion."

"So? Where is he?"
"Right now he's in China."
Perini's apoplexy was not fatal.

In Two Words: Im Possible

During World War II ballplayer Zeke Bonura, who had first-based for Washington and Chicago in the American League, did wonders for the morale of bored troops in Africa and other out-of-the-way places. Not even entertainers like Bob Hope, Frances Langford, and Joe E. Brown were more beloved by our G.I.s.

Zeke was a "character" in every sense of the word. He probably booted in as many runs as he batted in when he was an American Leaguer, but the fans loved him.

At Briggs Stadium in Detroit one afternoon the White Sox were five runs behind. It was the eighth inning. Two were out and Bonura was on third base. Suddenly he lit out for the home plate—and made it.

It was an incredible play from every angle. Slow-footed Bonura hadn't stolen a base in years, and the one run he gambled for made but a small dent in the Tigers' winning margin.

Manager Jimmy Dykes accosted him:

"What was the big idea?"
"You gimme the steal sign."
"Wha-a-at?"
"Sure did. You fingered your nose."
And so Dykes had, unconsciously. Thus did a manager's itching nose result in one more Bonura legend.

His Irony Backfired

"Frenchy" Bordagaray was on that screwball Brooklyn team which seemed to do everything wrong. In batting practice one day "Frenchy" let his bat slip. You might have known it. The big stick conked Manager Stengel on the noggin and knocked him cold.

For a change, the Dodgers won that game.

Next day Stengel, with a bandage on his head, met his charges in the dressing room.

"I suppose I ought to be proud of you Bums," he began. "You won a game yesterday. First win in 10 days. What you did yesterday you can do today."

"That's right, Casey," injected Bordagaray. "When I beamed you yesterday, that brought us luck. Let's do it again today."

Stengel called that Brooklyn outfit "Bums" so often that the nickname has stuck with them ever since.

The Moaner's Bench

"Rowdy Richard" Bartell has had a checkered career in baseball. While shortstopping for the New York Giants, the Chicago Cubs, and the Detroit Tigers, he has been alternately a hero and a goat.

With the pennant-winning Giants in 1937, for instance, he started out like a house afire. In his first 21 games he slammed out 10 home runs, and the fans were touting him as a second Babe Ruth. And then luck deserted him. During the remainder of the season he hit just three more home runs.

As a Detroit Tiger in 1940 "Rowdy Richard" sparked his club to an American League championship, to the surprise of everyone who'd seen his misplays and miscues with the Chicago Cubs previously.

Bartell had creaked through a dismal period with the Cubs. Didn't hit, didn't field well, and his throwing arm had a crick in it. His wild tosses to first base were so notorious that one fan wrote a letter to a Chicago sports editor and promised:

"If you'd like to take home a souvenir baseball, get a seat at Wrigley Field somewhere behind first base. All you have to do is wait, and Dick Bartell will throw a ball right up to you."

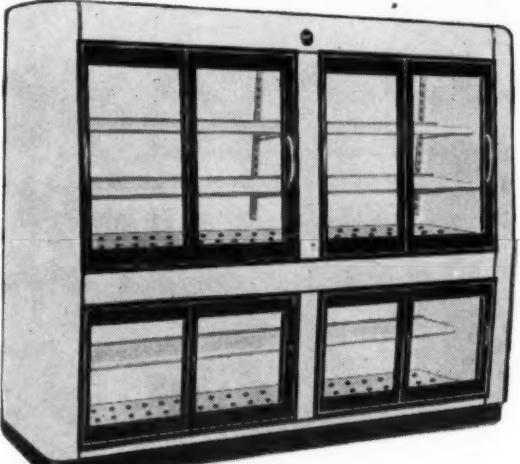
Dick tells this story himself.



Model 6 ODV
OPEN TYPE DOUBLE DUTY CASE for
VEGETABLE-MEAT-DAIRY PRODUCTS

6 Ft. Long

A beautiful, fluorescent lighted case. Great display capacity in minimum floor space. Constant refrigeration at proper temperature. Easy accessibility. Full length mirror. Large storage compartment. Top may be used for dry display.



Model 8 DSS
DAIRY WALL CASE
6, 8, 10 and 12 Ft. Lengths

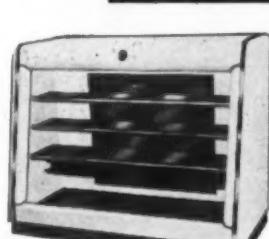
A porcelain finished beauty with brilliant fluorescent lighting throughout. Heavy duty coils or blowers (as desired) assure proper humidity always. Heavy duty porcelain adjustable shelves. Hard rubber sliding doors with Thermopane glass inserts. Automatic drains. Excellent also for Beverage display.

EVANS

cases are
profit builders

LOOK WELL-WORK WELL-SELL MERCHANDISE

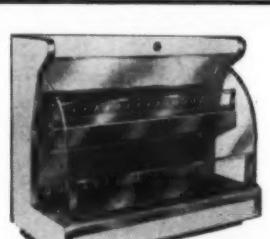
The Evans line has everything to give complete customer satisfaction . . . beautiful styling — perfect refrigeration — solid construction — great capacity — full product display — trouble-free performance. The dealer's best guarantees for assured sales, repeat business and continued profits.



Model 6 HR
FULL VISION DISPLAY CASE
4, 5 and 6 Ft. Lengths



Model 6 ODF
OPEN TYPE FROZEN
FOOD CABINET
6 Ft. Long



Model OTD
TRIPLE DECK OPEN TYPE
SELF-SERVICE DAIRY CASE
6 Ft. Long



Model 555
FULL VISION SELF-SERVICE
DISPLAY CASE
4, 5, 6 Ft. Lengths

COMPLETE DEALER INFORMATION ON REQUEST
EVANS MANUFACTURING CORP.

460 SOUTH TENTH AVENUE

MOUNT VERNON, N. Y.



I'VE GOT
MORE THAN 1000
"RIGHT ANSWERS"

CUTLER-HAMMER "SPECIFIC-FIT"
REPLACEMENT CONTROLS
FOR MORE THAN 1000 DIFFERENT REFRIGERATOR MODELS

You know you're
right when you
use C-H "specific-fit" controls.

9502N95
C-H "specific-fit"
for Mofat 1936-37
models.

9521N85C-H "specific-fit"
for Philco 1940
models.

9502N376 C-H
"specific-fit" for
Mayflower and Tri-
par 1933-34-35-
36 models.

9521N43 C-H
"specific-fit"
for Briggs 1938
models.

9521N56 C-H "specific-fit"
for Gile 1941
models.



Featured by Cutler-Hammer refrigeration wholesalers and recommended by alert service dealers from coast to coast.

Installing and Servicing 'Evaps'

1. Sub-cooling Coil Can Permit Economy In Matching Unit with Load
2. Before Starting, Check Fan Rotation and Motor Load, Belt Tightness
3. Clean Pump Screens, Sump and Lubricate Bearings Periodically

DETROIT—Numerous installation and service pointers on evaporative condensers were outlined for the new Michigan Association of RSES at its recent first annual convention held at the Sheraton hotel here by J. T. Maloney of Acme Industries.

First explaining that an "evap" combines the functions of a water-cooled condenser with those of a cooling tower, Maloney emphasized that its primary purpose is to conserve water and thus permit savings in water costs.

"But it also permits the user to comply with restrictions on sewage and will save sewage charges, and it can in some instances avoid excessive costs of installing larger waste and sewage connections," he explained.

In describing how the evaporative condenser operates to permit these savings, Maloney reminded the group that such a unit consists of three sections—the sump and pump, condenser coil and eliminator, and fan.

"Hot discharge gas from the compressor is circulated through the condenser coil in the 'evap.' Here the gas is condensed by combined action of the air that is drawn through the coil and water that's sprayed over it. As the water evaporates on the coil, it absorbs heat from the hot gas within, which then condenses.

"Each pound of water vaporized absorbs approximately 1,000 B.t.u. from the hot gas," Maloney explained. "Assuming that for condensing purposes 15,000 B.t.u. must be removed from the hot gas every hour for each ton of refrigeration, this means that only 15 lbs. of water will have to be vaporized per hour per ton.

Some Water Waste Advised

"In order to prevent deposits of salts and other residue materials in the evaporative condenser, however, it is usually advisable to waste an equal amount of water, so that in this case 30 lbs., or less than 4 gals., would be required per hour per ton of refrigeration. However," Maloney explained, "it sometimes is necessary to waste even more water if water hardness is excessive, but there is still a tremendous saving in total water consumption."

When selecting an evaporative condenser for a particular job, he continued, it sometimes occurs that the "evap" cannot be exactly matched to the load.

"If the total load with 'Freon-12' is not more than 5% greater than the rated capacity of the evaporative condenser, it is usually more economical to use a unit equipped with a sub-cooling coil rather than jump to the next larger size 'evap' because in the latter case greater horsepower fan and pump motors would be required. Practically no advantage, however, is offered by sub-cooling coils in ammonia systems," he pointed out.

With regard to installing and locating an evaporative condenser, Maloney explained that it could be either indoors or outdoors, depending on the space available.

"If installed indoors and used for summer operation only, the unit can also serve to ventilate the room in which it is located. However, if the unit is used for winter operation, it should be connected with a supply duct for outside air. In this event,

supply and discharge ducts should be arranged to prevent recirculation of discharge air.

"When the evaporative condenser is located outdoors on the roof, the entire finish of the unit will have to be protected against weathering. And if the receiver for the system is located outdoors, it should be protected against the rays of the sun. All motors should be totally enclosed if the 'evap' is outdoors.

"Regardless of where the unit is located, before starting it up the installer should check the following: make sure the fan is rotating in the right direction; check to see if fan motor is overloaded; determine tightness of belts because if belts are too tight motor will overload. When two

or more belts are used, they must be all identical in length.

"The pump rotation should be checked, also. Too small a stream of water generally means that the pump is running backward. Water level in the sump should be $\frac{1}{2}$ -in. or $\frac{3}{4}$ -in. below the overflow level.

"After the evaporative condenser has been placed in operation some maintenance will be necessary," Maloney told the group. "Pump screens and sump must be cleaned periodically.

"Bearings should be lubricated at least every three months, just before taking unit out of service, and two or three hours after the unit is started up. During lubrication the fan shaft should be turned slowly by

hand to assure proper lubrication. Over-lubrication," he cautioned, "will heat up bearings.

Check Motors, Belts

"Periodic checks of fan and pump motors for overloads and regular examination of belts to determine tightness and condition is also advisable," he said.

"If either hard water or soft but corrosive water is being used, water treatment should be employed. Generally, Micromet will be sufficient in the majority of cases where water must be treated. The initial charge of Micromet is generally 1-lb. for each 200 gals. of make-up water per day.

"Since Micromet dissolves at the rate of 25% of its initial weight per month regardless of how much water is passed over or through the material, generally $\frac{1}{4}$ lb. must be added each month for each pound of initial charge."

Maloney also suggested that if excessive head pressure occurs in a system using an evaporative condenser despite careful attention to the previous maintenance sugges-

tions, the presence of non-condensable gases would be suspected.

"This can be determined if the pressure is greater than the nominal saturated pressure of the refrigerant."

ASRE Section To Hear Talk On Effect of Solar Energy

CLEVELAND—Effect of solar energy on refrigeration and air conditioning will be discussed before the Cleveland section, American Society of Refrigerating Engineers Tuesday, Oct. 17, by George V. Parmelee, resident associate engineer of the ASHVE Research Laboratory here. The meeting will be held at the Cleveland Engineering Society.

Trane's Chicago Agent Moves

CHICAGO—Offices of Mannion & McCann, Chicago representative of The Trane Co., La Crosse, Wis., manufacturer of air conditioning, heating, and ventilating equipment, have been moved from 2326 S. Michigan to 341 E. Ohio St., here.

Cleveland Municipal Stadium Refrigerated by Frigidaire!



When the Berlo Vending Company of Philadelphia took over the concessions of the Cleveland Municipal Stadium last spring, they faced a crisis.

The old refrigeration equipment was obsolete—could not adequately serve a stadium full of people—and the baseball season was almost at hand!

Plenty of the right equipment had to be installed—and fast! So Frigidaire was called in to solve the problem.

30 Frigidaire Beverage Coolers and 21 Compressors Installed

In a short time, 25 carpenters, 8 plumbers, 8 electricians and 10 painters had made necessary building alterations and erected 21 sectional walk-in coolers. Then, in four days, the Gardella Brothers Refrigeration Company, Frigidaire Sales and Service dealer in Cleveland, installed compressors and coils for the walk-ins, put in 30 beverage coolers, and had the complete system in operation—in time for the season "opener"!

Since then, and throughout the baseball and football season, concession officials say they "always have an ample supply of cold drinks to fall back on in any emergency." Moreover, they point out that food preservation is more efficient, providing clean and healthful conditions as well as practical, economical operation.

Food and Drink Cooled for An Army of Fans

This was amply demonstrated when 79,000 roaring fans watched a double header between the Indians and the Yankees one day last spring. These fans consumed over 100,000 hot dogs, 19,000 ice cream bars, and 85,000 bottles of beverages—all refrigerated by this Frigidaire equipment.

Donald Holt, operations manager for the concession, says that "The installation in Cleveland may go a long way toward revolutionizing the refrigeration systems in other large stadiums throughout the country."

This is another example of opportunities open to Frigidaire refrigeration and air conditioning dealers in meeting requirements of jobs both large and small—another reason why you can't match a Frigidaire Franchise.

Frigidaire Dealers Have the Most Complete Line in the Industry

Over 400 different commercial refrigeration and air conditioning products—all backed by Frigidaire and General Motors—help Frigidaire dealers serve the refrigeration needs of every commercial user. The line of Frigidaire products includes Reach-In Refrigerators, Display Cases, Low-Temperature Cabinets, Beverage Coolers, Ice Makers, Water Coolers, Milk Coolers, Compressors, Cooling Units, Window-type, Self-Contained and Central System Air Conditioners.

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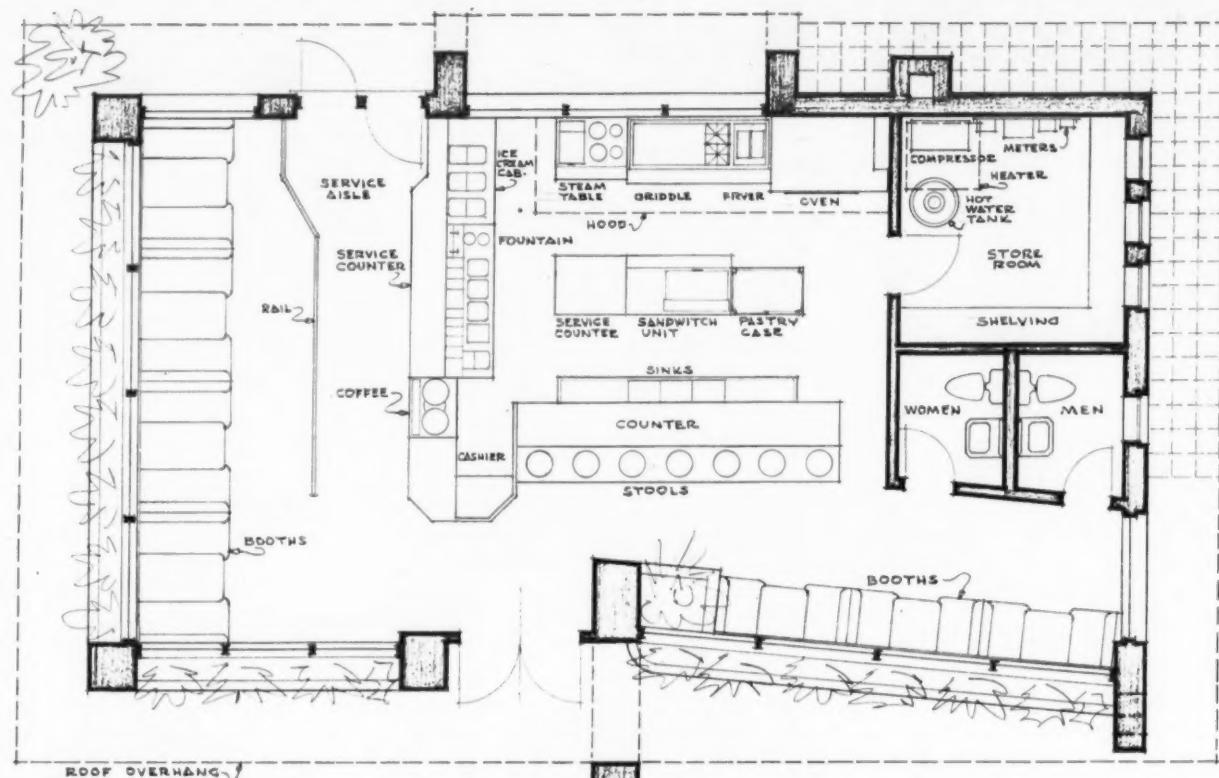
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REFRIGERATION and
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TOOLS—SUPPLIES

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DRIVE-IN: Stella Products Co. designed this layout for the interior of a proposed 25-ft by 44-ft. drive-in restaurant in Detroit. The commercial refrigeration firm also designed exterior of the restaurant. This planning service by Stella is preliminary to outfitting restaurants completely, from silverware to air conditioning.

Handling 'Turn-Key' Jobs for Restaurants

By John O. Sweet and George M. Hanning

DETROIT—After talking with two principals in a commercial refrigeration dealership who have been rather successful in tackling the restaurant field, one gets these two impressions of what it takes to handle this type of business:

1. The commercial refrigeration dealer must be prepared to take on the whole job—from supplying the complete furnishings to building the restaurant, if necessary.
2. The dealer must set up a separate department for this business

and staff it with specialized salesmen who have a good knowledge of all aspects of restaurant operation.

The F. D. Stella Products Co., run by Frank D. Stella, president, and his brother, "Hank," general manager, operates on this basis.

The restaurant and bar division is one of six departments established by the brothers about a year ago in a move to eliminate duplication of effort and effect closer control of the firm's many activities. It is under the direction of Hank, who operated a restaurant himself for a short time before joining the company in 1947.

Here is the kind of "turn-key" job the department is equipped to do for the restaurant trade: It will design both the interior and exterior of the building, act as general contractor, supply and install all equipment from the silverware to the air conditioning system including custom-built items, and guide the operator through the opening days.

Naturally, the department also offers a complete modernization service to restaurants already in operation.

The company itself sells such commercial refrigeration items as reach-in refrigerators, low-temperature cabinets, ice cream freezers, ice cube makers, sandwich units, salad cases, water stations, soda fountain equipment, back bars, and beverage coolers.

Other equipment handled includes commercial ranges, griddles, fryers, broilers, coffee urns, dishes, tables, chairs, booths, canopy sections, exhaust fans, etc.

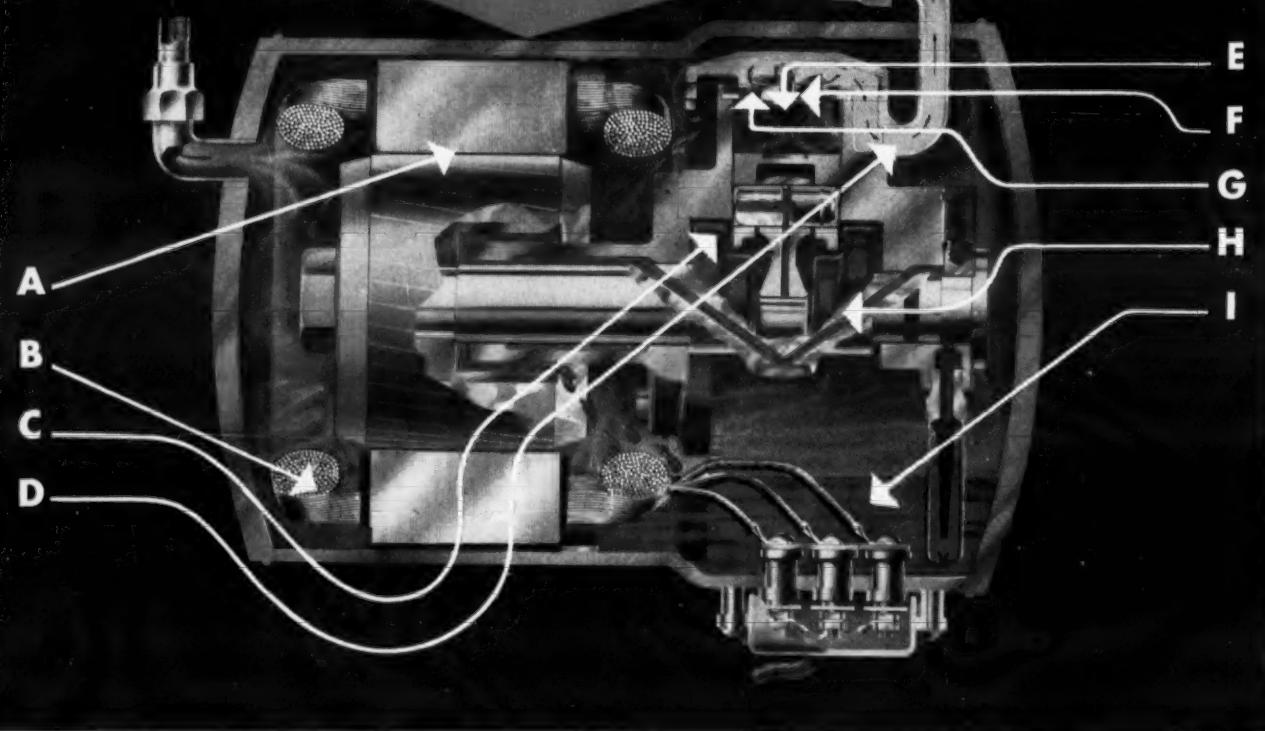
When a restaurant-department salesman makes his first call on a prospect, he seldom goes in "cold." The restaurateur has been informed of the company's services through direct mail pieces and trade paper and local newspaper advertising.

Often the salesman—who is a specialist at this business and knows what makes a restaurant tick—will order a meal, taking time to look around and observe the manner in which the restaurant is run.

Then he talks with the owner and introduces himself. He gets the

(Concluded on next page)

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CHECK THESE IMPORTANT POINTS in the schematic diagram of the 1-cylinder sealed motor compressor. These features have been G-E designed to assure more refrigeration per dollar through long life, low operating cost and minimum servicing.

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RUNS QUIETLY AND SMOOTHLY, BECAUSE OF

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Please send me the following literature:

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- Condensed Catalog—Open Type Units SP-51-1206A
- Renewal Parts Catalog SP-40-1164B

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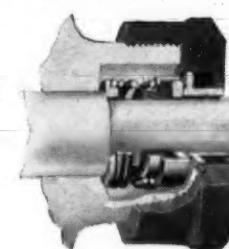
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Commercial Firm Offers Restaurants Help On Basic Needs, Financing, Opening Days

(Concluded from preceding page)
owner to tell him his troubles and then suggests how the business might be improved.

The first thing the salesman has done, usually, is to create a demand for his products. So he avoids talking price right off the bat.

It is a fact that many of the men in the food service field know very little about modern equipment, what will do, or how to use it, the men have found. This applies particularly to the "old-timers" who have not kept up with modern trends.

When the salesman gets the owner to the point where he is ready to consider ordering, then the two sit down and figure out exactly what the customer needs. The company has worked out a table of allowances listing just how much silverware and dishes are needed and the size serving units required by a restaurant of any given seating capacity. The owner is started out with just these basic needs, no more, no less, according to Frank.

When the customer's needs are determined, the question of financing comes up. Frank has arranged with a local bank to handle all this paper for him.

Banks and finance companies, Frank commented, are rather reluctant to finance restaurant installations because of the specialized equipment they require. Lending institutions feel that they will have a hard time disposing of it in case of default.

Therefore, Frank has arranged with his bank for the latter to hold back part of the finance charge. This gives the bank a more secure feeling and helps Stella Products make sales that would otherwise be impossible.

Frank stressed that it's not wise to let the customer try to do his own financing. Since banks do not like to handle this kind of paper, the banker usually objects to the restaurateur buying a great deal of equipment at one time.

Once a job has been sold, the salesman handling it makes a point of being on hand when the equipment is delivered to be sure it arrives in good condition and is satisfactory to the customer.

When the equipment has been installed, the service manager checks over the workmanship carefully before approving it. If any substandard work is found, nothing is said to the new owner, but the serviceman is quietly recalled to put the job in first-class shape.

Opening day is a most important event for the new or remodeled restaurant, Hank firmly believes. Everything should operate efficiently and smoothly in order to impress the customers.

If a customer is favorably impressed on his first visit, he will come back. If he isn't, it may be months before he gets over his original prejudice and gives the restaurant another try.

With this thought in mind, the Stella salesmen carefully instruct the restaurant owner in the operation of his new equipment and even conduct "dress rehearsals" of opening day if necessary.

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York Equipment Installed For Denver U. Ice Rink

DENVER — The installation of York Corp. refrigerating equipment for freezing the ice rink at the Denver university's huge arena here was revealed recently by the company.

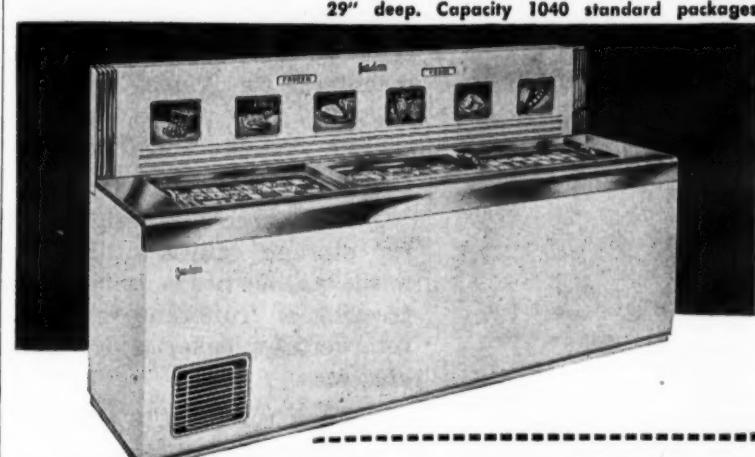
The equipment, purchased from the York Denver office, included two 125-hp. motors driving two 10-in. by 10-in., 2-cylinder vertical single acting York compressors, 30-in. by 16-ft. horizontal shell and tube ammonia condenser, 30-in. by 16-ft. horizontal ammonia receiver, and a 38-in. by 16-ft. horizontal low pressure float ammonia brine cooler.

The installation was made in late 1949 in a building the University had obtained from the Navy training station at Farragut, Iowa. One end of the building contains the hockey rink with seating capacity for 7,500 persons.

University officials decided to use a Bevington-Williams, Inc., patented floor and York equipment for the hockey rink.



M17 (above). 76" long, 36" high (less display). 29" deep. Capacity 625 standard packages.



M26 (below). 107 1/4" long, 36" high (less display). 29" deep. Capacity 1040 standard packages.

SELF-MERCHANDISERS With an Amazing Sales Record!

AVAILABLE IN TWO SIZES

Featured in the promotion plans of leading ice cream manufacturers and distributors. Features include: Quadruple, air sealed, Thermopane glass display front. Refrigerated plates plus wrap-around coiling. All welded steel construction with mar-proof auto-body finish. Full color illuminated display. Beautiful Slimline lighting. Extra wide top opening for full package display. Hermetic unit on pull-out tracks. 5 year warranty.



OF9—54 1/2" long. Capacity approx. 300 pts. Ice cream or frozen food packages.

OF17—91 1/4" long. Capacity approx. 600 pts. Ice cream or frozen food packages.

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STAINLESS STEEL DRY BEVERAGE COOLERS. 12 to 37 case capacity. Remote or self-contained. Model 40—4'6" high.



STAINLESS STEEL REACH-INS AND 2-TEMP REFRIGERATORS. Model SC30G with Thermopane doors illustrated.



SECTIONAL METAL-CLAD WALK-IN COOLERS AND FREEZERS for easy erection on location. Write for special catalog.

Pledge To Maintain Ethical Standards Re-Affirmed by Wesco

NEW YORK CITY — Recognizing that "mutual confidence among individuals and among businesses will strengthen the welfare of our country," John F. Myers, president of the Westinghouse Electric Supply Co., has made public announcement that his firm will continue to practice during the present critical situation "the same high business standards it has observed for 28 years."

In a message to the company's thousands of appliance, radio-television, and electrical supply dealers throughout the country, Myers pledged that Wesco would not engage in speculative buying, hoard products, or be a party to profiteering operations; instead, he insisted, the company will exert every effort to hold the line on prices, stand behind its products, and will supply continued good service and deliveries to regular customers, large or small.

The supply firm, with 109 branches

operating in 46 states, is the national wholesale marketing outlet for the Westinghouse Electric Corp. and many other manufacturers.

"We in Wesco believe it is timely to re-declare the long-standing business principles which shall continue to guide us," Myers said.

Those principles are as follows:

"a. Engage in speculative buying.

"b. Hoard products or materials.

"c. Raise prices to its customers unless forced to do so as a result of increased costs from our suppliers, or for other unavoidable and legitimate reasons.

"d. Press customers to buy above their actual needs.

"e. Be a party to black market or profiteering operations, or other transactions which would violate the spirit or the letter of any law.

"f. Alter the ethics and fair dealing policies which have built business."

JORDON
EQUIPMENT FOR MERCHANDISING
DISPLAY • STORAGE

... Sales - Wise Design
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FROZEN FOOD MERCHANDISERS IN EVERY POPULAR SIZE

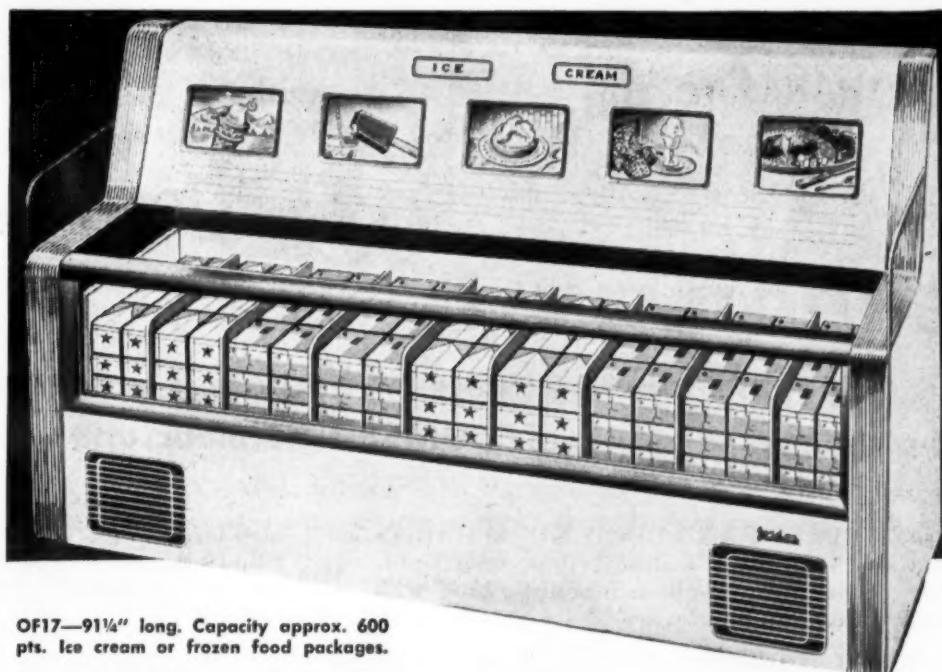
★ Powerful Warranties! ★ Immediate Delivery! ★ 9-12-17-26 Cu. Ft. Models!
★ Quality Construction Inside and Out!

FEATURES THAT CREATE LASTING SATISFACTION

All heavy duty materials and construction. Stainless steel top apron, door frame, door racks. Sliding doors can be removed for peak hour operation. Completely vapor-sealed. Extra heavy insulation and extra refrigeration coils assure safe, ample refrigeration. Superstructures (optional) have brilliant illuminated food illustrations. JORDON white auto-body finish. Plug-in operation with finest warranted hermetic sealed units on pull-out tracks.



M9—54" long, 38" high (less display). 29" deep.



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They'll Do It Every Time . . . By Jimmy Hatlo



Do You Have 'One Foot In the Door'?



GOOD HEALTH AND GOOD WORK HABITS are mutually dependent realities; thus, wise employers do everything possible to maintain the good health of their employees.

Medical men agree that one of the most important daily essentials to good health is an adequate water intake both summer and winter; which also represents, pleasantly enough, one of the most inexpensive means of helping to maintain work efficiency.

The application of drinking water coolers in commerce and industry is increasing rapidly; and the application of Tecumseh Hermetic compressors by water cooler manufacturers continues at the same

high level . . . for Tecumseh Hermetic compressors are famous the world over for their long-lasting, trouble-free performance, their low operating cost. Here are just a few of the many reasons for their superiority:

Large, oversize bearings; counterweighted crankshafts; super-finished bearing parts ($\pm .0001"$); Chieftainized connecting rods and pistons; simple and positive motor controls; leakproof motor terminals.

Many models include both fan-cooled and static condenser type units. In various combinations of compressors, motors and condensers, they cover the entire range of applications from 1/9 h.p. to 3/4 h.p.

Write for complete information.



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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

Imagination— Thy Name Is America!

FREEDOM to Think! It's wonderful! And we have it—and profit by it—in this wondrous industry of ours.

Several newcomers in the refrigeration and air conditioning field have enjoyed encouraging first-years because they have placed bets on new ideas. They have specialized on "back-door" and "around the corner" refrigerators profitably.

Examples: biological cases, florist display refrigerators, summer-defying candy cases, combination reach-in and low-temp freezers for tourist-trade entrepreneurs, ice-cube and ice-flake machines for clubs, food and beverage automatic vending machines, heat pumps, industrial water cooling systems, portable counter freezers and frozen custard dispensers, sectional walk-in coolers, refrigerated transport items (rail, truck, bus, and air).

Also: specially designed fish and vegetable cases, eye-appeal fur storage vaults, utility-size display cases for a variety of miscellaneous needs, tunnel-freeze installations for the commercial freezing of fruits and vegetables, multi-sized milk coolers, dough retarders for bakeries, low-temp "seasoning" of synthetic rubber, etc., etc.

There's no end to these new ideas.

Many other new applications of specialized refrigeration and air conditioning products are still in the incubator stage.

Combined, they ought to keep salesmen for condensing units (and kindred tailored refrigeration products) alert, happy, on their toes, and prosperous during coming years.

Depression or Recession in this industry?

It shouldn't happen and can't—not to the imagineers who produce, promote, and sell particularized specialty products to dormant but receptive markets which yearn for satisfaction and exploitation.

Imagination—that's synonymous with our Industry, and with America itself.

Look at This Every Day

HERE'S something which should be tacked up on bulletin boards, and *left up*—so that as many people as possible may read it and re-read it:

"The private enterprise system is the best known means of bringing about effective world prosperity and employment, and of securing and maintaining world peace, thereby assuring a higher standard of living for all peoples."

"Therefore, it is urged that governments adhere to these principles: equality of opportunity; equality under law; reward for initiative; privilege for thrift; a tax structure that encourages incentive and risk; restriction of monopoly; abstinence of government from competition with private business; freedom of production and sale; equitable distribution of profits with consumers' and labor's interest safeguarded to the end that more and more things may be supplied to more and more people, thereby producing maximum employment at the highest possible level of wages; government, under law, that will provide encouragement to business through provision of an economic atmosphere in accord with the above principles."

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Using the Right Oil Separator?

A Separator Designed for a 'Freon-12' System Is Wrong for 'Freon-22'—Ed Kellie Tells Why

DETROIT—To do an effective job of keeping out of a "Freon-22" system, a different oil separator is needed than that commonly used for Freon-12," SO_2 , and methyl chloride systems, Edward Kellie, president of Aminco Refrigeration Products Co., told the Michigan Association of the Refrigeration Service Engineers Society recently.

Speaking at the first annual convention of that group, held in the Sheraton hotel here, Kellie explained that the float mechanism in a separator designed for "F-22" has more buoyancy than is used in "F-12" separators in order to prevent the valve on the oil return line from hanging open and causing a drop in the back pressure.

High side pressures are considerably higher on "F-22" systems," he said, "and additional buoyancy is required to open the needle valve in the oil return against this high pressure.

"It has been our experience," he continued, "that a float mechanism for 'F-22' is too buoyant for 'F-12' due to the fact that it is desirable to have a hold over and dumping effect in the oil return mechanism so that the float valve is not opening and closing at too frequent intervals.

"If this occurs, the back pressure becomes affected. We, therefore, see that there must be a difference in the buoyancies. On 'F-22' we must

have a float that will open at the high pressures encountered or the separator would fill up with oil and the oil would not be returned to the crankcase.

"On the other hand, if we used the same mechanism on 'F-12,' the float would be held open or would open and close at such rapid intervals that the crankcase pressure would be raised causing trouble on our back pressures.

"It is for this reason that we have a different separator for 'F-22' and that it should not be used on 'F-12' nor should an 'F-12' separator be used on 'F-22.'

"One word of warning on charging an 'F-22' job—Take it easy! 'F-22' will go wild and foam up the oil pushing it through the entire system if charging is carried on too rapidly."

Kellie commented later that the "F-22" separator made by Aminco is the same as the propane separator it has made for years for the Phillips Petroleum Co.

"We ran into the same sort of troubles and found the same separation problems in 'F-22' that we had been having in propane," he said.

He said that before "Freon-22" came out, he had been using propane separators for years and had gained a great deal of experience in using them.

Lester in Kold-Hold Power Take-Off Div. Sales Post

LANSING, Mich.—In announcing the appointment of T. O. Lester to the post of sales assistant of the Power Take-Off division of the Kold-Hold Mfg. Co. here, J. R. Tepfer, general sales manager, disclosed the company was about to introduce a radically new compressor powering unit for trucks.

Although details of the unit are being kept secret until the sales organization for this division is complete, the naming of Lester to the sales post indicated development is well on its way.

Lester brings with him an extensive background of experience in the refrigeration field.

CHOICE OF THE INDUSTRY Since 1927

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Refrigerator Door Gaskets and Accessories

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DEAN

PRODUCTS, INC.

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Firm Uses New Machine To Pre-Package Celery Stalks In Pliofilm

JERSEY CITY, N. J.—Pre-packaged celery, wrapped in pliofilm by a special machine at the rate of 50 stalks a minute, is being supplied to A & P stores in metropolitan New York by the Atlantic Commission Co., produce buying affiliate of the supermarket chain.

The machine trims each stalk of washed celery to a uniform size and drops it into a container. Above the container is a huge drum that heats and stretches the pliofilm. The wrapping is then rolled around the celery, heat sealed, and the rough edges clipped off.

Advantages to the consumer are that the pre-packaged celery stays crisp longer, retains moisture, and is more sanitary. For the grocer, the big advantage of such a packaging machine is that it is more adaptable to self-service.

The company reported that with a few modifications, the machine can be used to package cauliflower and head lettuce.

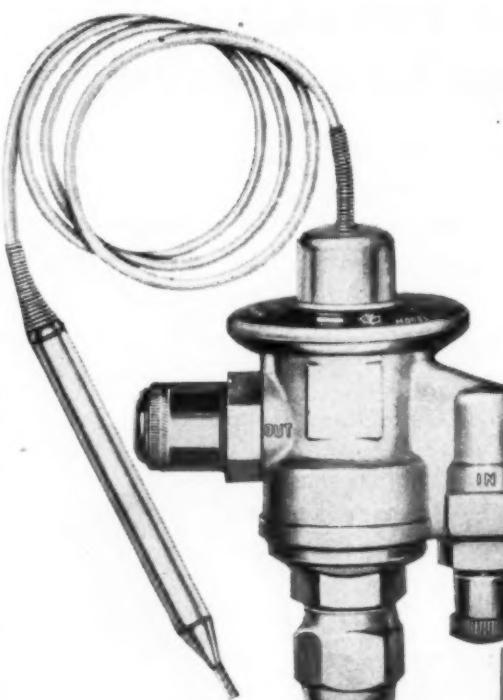
W. V. Davidson Is Elected Vice President of W. B. Connor Corp.

NEW YORK CITY—W. V. Davidson, Jr., has been elected executive vice president of the W. B. Connor Engineering Corp., manufacturer of Drexel activated carbon air recovery and purification equipment and Knodraft adjustable type of air diffusers.

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If you didn't, you could have! This 3-way Warren Model RCV (patent pending) has found ready acceptance among grocers all over the country—large and small, service and self-service. It's attractive, efficient, and does a lot of selling in a small space. Like all Warren Refrigerated Cases it is completely modern. Franchises are available in some territories. How about yours?

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VALVES

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What's New

Pioneer Ice Cream Freezer Operates In Refrigerator

KEY NO. P-1021

LOUISVILLE, Ky.—Dasher-mixed ice cream can be made in any standard refrigerator through use of its new "Pioneer" electric ice cream freezer, according to Louisville Electric Mfg. Co.

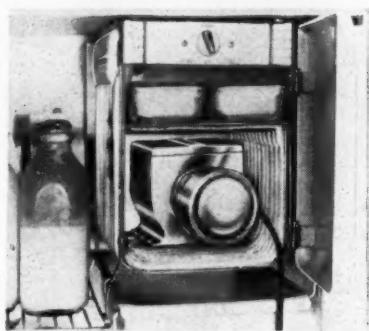
The company pointed out that no ice, salt, or pre-mixing are required. The user pours ingredients into the freezer, places it in the bottom of the freezing compartment of the refrigerator, and then plugs it into an ordinary electric outlet, it was explained.

"Both compartment and main doors close snugly over the thin, flexible, rubber-covered cord," the manufacturer said. "In a matter of minutes, the Pioneer Freezer makes a generous 'country-style' quart (almost three pints) of delicious, dasher-mixed ice cream."

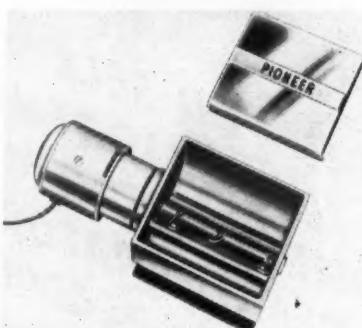
Instruction and tested recipes are available, the manufacturer has announced.

Constructed of aluminum and measuring 5 in. by 11 in., the freezer consists of a container, mixer, removable electric motor, and cord. It operates on 110 volts a.c./d.c. The motor is said to turn off automatically as soon as the ice cream is made.

To be distributed nationally, the freezer retails for \$29.95 and is guaranteed for one year.



IN OPERATION: Freezer fits into evaporator and electric cord is flat to allow snug closing of doors.



BIRD'S EYE VIEW: With top lid removed the interior of the Pioneer freezer is visible. The dasher-type mixer fits any standard refrigerator.



Acme Gas Mask Face Piece Has 3 Different Uses

KEY NO. P-1022

CHICAGO—A new gas mask face piece which provides chin-style, chest-style, and hose-mask connections in one unit was recently announced by the Acme Protection Equipment Co.

The new face piece, known as No. 6, permits the use of the same mask for three different services. It includes the regular Acme features of full vision and dead-air check valve and introduces a new type inhalation-exhalation valve for the purpose of insuring minimum breathing resistance.

The new face piece will replace the Acme No. 4 and No. 5 face pieces which were limited to hose and chin canister connections, respectively, the company further indicated.

The new face piece will replace the Acme No. 4 and No. 5 face pieces which were limited to hose and chin canister connections, respectively, the company further indicated.

'3-In-1' Soft Drink Unit Fits Everfrost Fountains

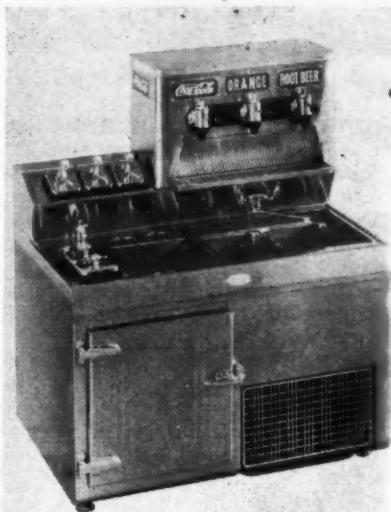
KEY NO. P-1023

LOS ANGELES—Originally a custom unit built for one of Hollywood's most modern drive-in restaurants, the Everfrost "Speedserv" has been introduced by Anderson & Wagner, Inc., as a standard unit in the Everfrost line and is now available at Everfrost dealers throughout the nation.

The Speedserv collects three soft-drink dispensers in one unit, thereby eliminating the necessity for three individually iced, often-scattered drink dispensers. In addition, the larger capacity syrup storage of the Speedserv permits service of more drinks without the necessity for replenishing the syrup supply.

The need for a draft arm station at the soda fountain is eliminated by the Speedserv's double-duty faucets. One drink mixing head also supplies a fine or coarse stream of carbonated water while another one is employed to supply cold, plain water.

The new model can be installed on any standard Everfrost soda fountain, which is equipped with a



carbonator and features mechanical cooling of drink syrups to 25° F. Carbonated water is cooled to 36-40 F., and, since the syrup is 12° colder than freezing water, the need for ice in the drink is said to be eliminated.

Blower-Type Unit Heater Designed for Large Areas

KEY NO. P-1024

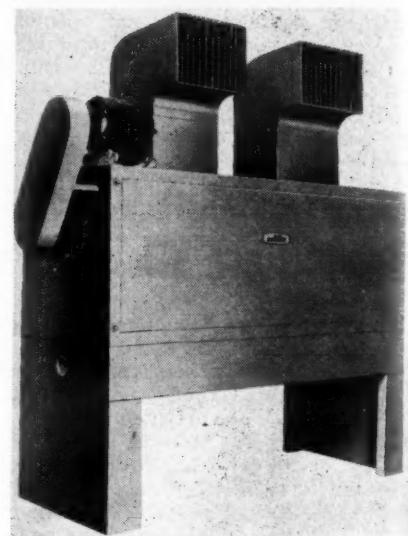
MINNEAPOLIS—A new blower type unit heater designed to heat large areas efficiently and inexpensively has been announced recently by the U. S. Air Conditioning Corp. here.

The new heater is being manufactured in eight models with capacities ranging from 35,000 to 2,000,000 B.t.u. and 1,200 to 33,000 c.f.m., the company said.

The heater is composed of a basic blower section with the heating coil attached. The blower section is so compact that it can be passed through ordinary doors and windows.

It can be rotated to face the outlets in any direction. The outlet cowls can be attached to the blower outlets in any of four positions . . . units may be inverted, floor, ceiling, or wall mounted.

The basic blower section is constructed of heavy gauge steel, with corrosion-resistant finish inside and out. Self-aligning flange type bearings, in two-bearing design, are



mounted outside the housing, away from the heat, allowing easy lubrication. Forward curved blowers are said to make the heater efficient and quiet.

Information Center



Here is an easy, convenient way for you to get more information on "What's New" items and on products advertised in this issue of AIR CONDITIONING & REFRIGERATION NEWS. New literature and catalogs available to readers can also be obtained by using the form below. Your requests for this information will be forwarded promptly by the NEWS.

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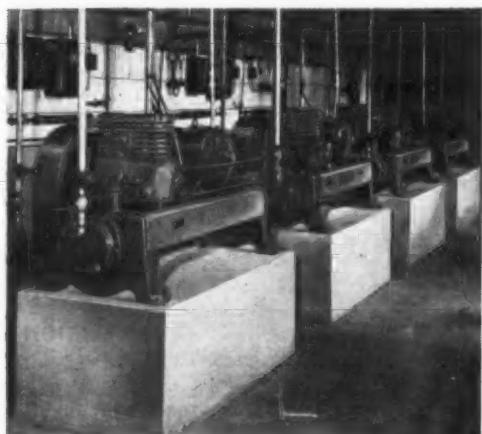
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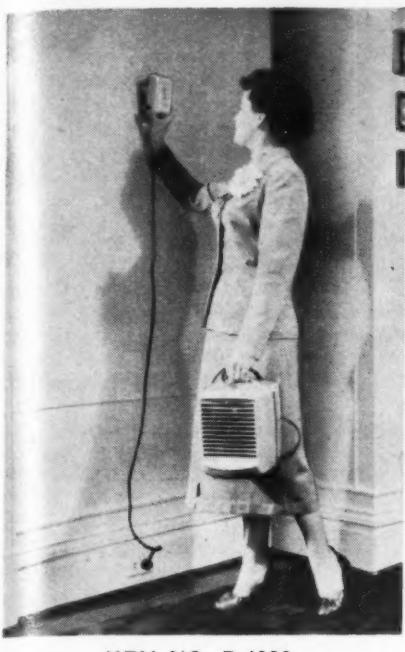
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MILLS CONDENSING UNITS

CAPACITIES FROM 10 H.P. DOWN TO 1/4 H.P.



What's New (Con't)

Portable Heater Features
Plug-In Thermostat

KEY NO. P-1026

PITTSBURGH — A combination Chromalox pin-up, plug-in thermostat and portable Chromalox deluxe heater have been introduced by the Edwin L. Wiegand Co. here.

The Chromalox thermostat controls the heater within a range that covers higher temperatures needed in sickrooms, nurseries, and other parts of the home to low temperatures for just preventing freezing in milkhouses, pump rooms, etc.

The prongs of the heater plug are inserted in a series adaptor plug on the thermostat cord which in turn is plugged into any 115-120-volt outlet. With a total weight of only 8 1/4 lbs., the thermostat and heater are easily carried from room to room.

An important feature of the 1,500-watt Chromalox deluxe heater is the totally insulated Chromalox tubular element which puts a greater heating area in contact with air forced through the heater.

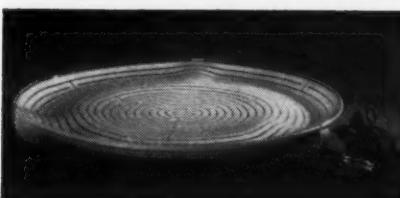
An unusual amount of radiant heat is emitted by the element and this,

combined with the circulating heated air, produces a high heating efficiency, the company claims.

The shielded motor is quiet. Rubber feet absorb any vibration and permit placing the heater on any surface.

The heater switch knob for manual operation is located on top. Both heater and thermostat cords are rubber-covered.

The list price of combined heater and thermostat is \$33.85.

Radiant Heated Platter
Keeps Entire Meal Warm

KEY NO. P-1027

BERGENFIELD, N. J. — "Hot-Maid," an electric platter designed to serve an entire meal and keep it "piping hot," has been introduced by Appleman Glass Works here.

The platter, made of tempered glass (Electriglas), warms food by radiant heat. This means, the company said, that food will not dry out and thus can be kept hot indefinitely.

The appliance is 19 1/2 in. in diameter. It holds a 16-lb. turkey and all the trimmings.

Hot-Maid can be used on either alternating or direct current. It comes equipped with a 6-ft. cord set.

The platter can be detached from its wooden base for washing.

An advantage cited for the appliance is that it "saves the housewife countless steps. The entire meal is carried to the table in one trip and it eliminates the necessity of the housewife getting up from the table to reheat the meal."

The specially heat-treated glass, described as "virtually unbreakable," is said to retain warmth for a half hour or more after it has been disconnected.

Retail price for the 19 1/2-in. size Hot-Maid is \$16.98.

Sherer Introduces 2 New
Glide-Door Reach-Ins

KEY NO. P-1028

MARSHALL, Mich.—Sherer-Gillett Co. has announced addition to the Sherer line of models 45-4SD and 70-6SD glide-door reach-in display refrigerators.

The refrigerators feature glazed display doors that glide on roller bearings. Two thirds of the display is through the top doors at eye-and-reach level, it was pointed out by the manufacturer.

Model 45-4SD has four doors while the model 70-6SD has six. Door frames are made of extruded aluminum.

Front and all interior lining is acid-

resistant porcelain. Shelves are adjustable on 1/2-in. centers.

The new refrigerators lend themselves well to packaged displays in retail food markets for self-service operation, the company said. They are also designed to "speed up service in restaurants, hotels, etc., where the glide-door gives quick access to foods and likewise does not block heavily traveled aisles when opened," Sherer Gillett stated.

Coiling in the refrigerators is said to be ample in capacity for beverage refrigeration. The model 45-4SD will display 37 cases (888 12-oz. beer bottles) while the 70-6SD will display 55 cases (1,320 bottles).

Circuit Tester Measures

Current Consumption

KEY NO. P-1029

NEW YORK CITY—A new instrument for testing all electrical circuits and appliances has been introduced by the Superior Instruments Co., here.

Called the model 50 utility tester, the instrument will measure the actual current consumption of any appliance or utility either a.c. or d.c. and will measure it while the unit is in operation.

The reading will be direct in amperes. The appliance may be plugged directly into the front panel receptacle on the tester. A special pair of insulated clip-end leads is included for motors.

The tester incorporates a direct-reading resistance range which will measure all resistances commonly used in electrical appliances and motors. This range will enable con-



tinuity checks and tests for shorts and opens.

The model 50 will indicate excessive leakage between a motor and a line up to 10 Megohms. It will indicate when a three-phase motor is running erratically due to a "blown" fuse.

It will measure the actual voltage and indicate whether the current is a.c. or d.c., and if the frequency is 25 cycles or 60 cycles.

The model 50 comes housed in a round cornered molded bakelite case. It measures 3 1/4 in. by 5 1/8 in. by 2 1/4 in. Complete with all test leads and operating instructions, it retails for \$13.90 net.

Other uses for the tester include testing thermostats under actual working conditions, locating opens, shorts, and grounds, checking and locating cause of failure in three-way heat control switches, and testing bulbs, filaments, and fuses, it is pointed out.

Superior's absolute quality control
reflects in its leadership in
every field it serves

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symbols
of
safety



With Superior, SAFETY is of paramount importance. Safety is built into each valve and accessory—plus rugged dependability and rigorous testing and inspection. This combination is one of the reasons why outstanding names such as Shell and Esso accept and use Superior products. You, too, will want to learn about the Superior safety features—write today for your copy of our Catalog.

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Stay Out of Trouble!
with every ICE MAKER**

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Automatic Products Buys Factory In Ontario, Can.

MILWAUKEE — Acquisition of a plant in Cooksville, Ont., Can., to be used for the manufacture and assembly of controls has been announced by Automatic Products Co. here.

E. A. Vallee, executive vice president of Automatic Products, said the plant had been purchased from Durham Fabrics, Ltd. The building will be taken over by Automatic Products Oct. 2. Vallee said that it would be the first plant of its kind in Canada, and is the first plant purchased by Automatic Products outside Milwaukee.

The Canadian plant will be used to manufacture and assemble gravity-fed oil burner controls, commercial refrigeration controls, and, eventually, gas controls.

The firm also manufactures automatic and thermostatic expansion valves in all sizes, solenoid valves in all sizes, constant pressure valves, and strainers and driers.

The new plant will be under the direction of Remy H. Ludwig, recently appointed Canadian manager.

Moves Up In G-E Section

BRIDGEPORT, Conn.—J. R. Davis has been appointed assistant supervisor of the field service section of the General Electric Co.'s product service division.

He joined the company as a parts foreman in the San Francisco warehouse in 1941, and was most recently district service supervisor in that city.

LINCOLN, Neb.—A completely air conditioned community shopping center which houses a supermarket, drugstore, retail bakery, and beauty salon in a 90 x 108-ft. building at 17th and South Sts., attracted well over 10,000 persons during a three-day grand opening which ended July 1, and business in the modernized and enlarged center has been running from 150 to 400% ahead of pre-remodeling days in the various stores, according to the managements.

The building is owned by Milton

Beechner and the supermarket bearing his name occupies the lion's share of the space, or 60 x 108 ft. Each store has its separate air conditioning system, and the supermarket has 144 lineal feet of open, self-service Friedrich refrigerated display cases plus an additional 50 ft. of display cases for fruit, supplied by the same maker.

The supermarket has year-round air conditioning with additional separate cooling systems for the meat cutting and wrapping rooms; self-service refrigerated display cases against all walls except the all-glass front, and 11 individual refrigeration units to serve the food display and air conditioning equipment.

A Carrier air conditioning system has been installed in the balcony of the supermarket which also houses rest rooms, employees' lounge room, and offices. It was installed by Max Lehman, Carrier distributor of Lincoln, who also put in the heating system.

The general air conditioning system uses water from the city mains as a coolant, but has been set up so that mechanical refrigeration can be

added if needed.

Space adjacent to the front window east of the check-out stands has been leased to Mr. and Mrs. Forrest Coffman as a retail outlet for their well-known line of pastries and variety breads. The bakery is cooled by the general air conditioning system which has ductwork leading to all parts of the store.

Along the east wall are 50 ft. of refrigerated vegetable cases, while across the aisle and facing this line of fixtures are an additional 50 ft. of Friedrich display cases which are ventilated for fruit display but are not refrigerated. These are used for bananas, citrus fruits, etc. Service units have been installed at the end of each of the vegetable and fruit cases for the convenience of both customers and clerks.

Each unit includes a sacking counter, scales, and a circular opening leading to an enclosed garbage can underneath for discarded paper towels, carrot tops, etc. At the side of each unit is a roll of paper towels for use by customers, while the front has compartments for the different

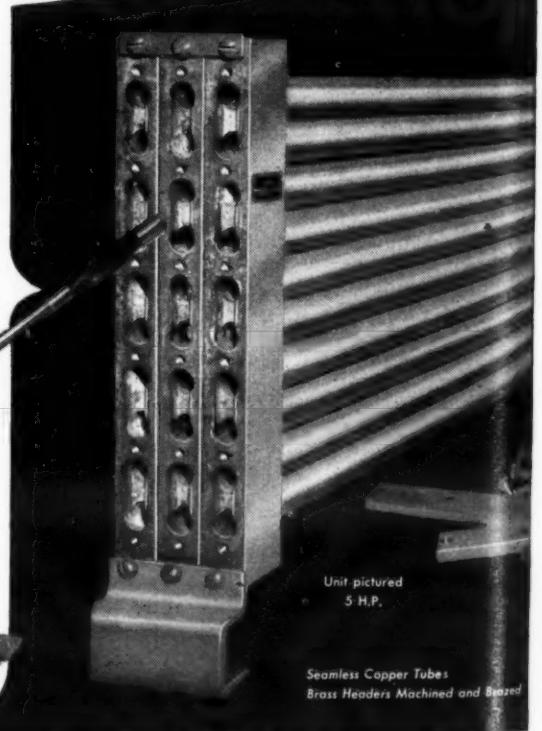
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SHOPPING CENTER Market, Drugstore, Bakery, Beauty Shop Housed In Fully Air Conditioned Building

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HALSTEAD & MITCHELL *Cleanable* CONDENSERS



Unit pictured
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Seamless Copper Tubes
Brass Headers Machined and Brazed

Service Engineers and commercial users throughout the refrigeration industry are now specifying HM Condensers for replacement and conversion orders. These new HM units combine two features never before obtainable in tube-within-a-tube water-cooled condensers: (1) They're CLEANABLE... the water tubes are easily accessible at both ends for the spiral cleaning tool to restore the interior water surfaces to "new-unit" efficiency. (2) A TRUE-COUNTER-FLOW relationship is achieved between the coolant and the refrigerant through a unique seamless copper tube-within-a-tube construction that makes obsolete most types of similar water-cooled condensers. Thus, water and space requirements are reduced substantially and a most economical operation is obtained.

HM Condensers available from 1/2 to 10 H.P. from wholesalers in principal cities.

OFFICES: Bessemer Building, Pittsburgh 22, Pa.

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ARCADE

MANUFACTURING DIVISION
ROCKWELL MANUFACTURING COMPANY
FREEPORT, ILLINOIS



Meat Sales Show Sizeable Gain After Supermarket Switches to Self-Service

Concluded from preceding page)
sides of sacks and a roll of wrapping paper.

The rear wall has 50 ft. of self-service cases for pre-packaged meats. Beechner said that 95% of his meat business is self-service and there is no service meat department on the floor, although a door at one end of the self-service cases leads directly to the cutting room and bears the sign: "Meat Service—Special Cuts."

Special Cuts Available

Customers wishing special cuts walk through the door and are waited on the same as at a regular service counter except that the meats are taken from the adjoining walk-in cooler. Beechner explained that he operated the pre-packaged meat department for several weeks before the grand opening was held, also at his second supermarket in Lincoln, and that it has been highly satisfactory. Meat volume has been much greater than it was with the service system.

Cutting and wrapping rooms are separated by a window and glass door and are directly back of the self-service meat cases. Door to the walk-in box is about midway between the two rooms. Semi-circular, blower-type wall cooling units have been installed in each of the two rooms to provide the best possible distribution of refrigerated air, and if one refrigeration unit should go out of order, the other unit will serve both rooms as a safety measure.

The same multiple system is used on all the refrigerated vending cases. Eleven compressors located in the basement are situated directly beneath the respective air conditioning or commercial refrigerator units they

serve. The shorter connection effects an economy in refrigeration costs, the merchant declared. Each refrigeration unit is three-phase and cuts out automatically, including the flow of water, if something should go wrong.

The management further pointed out that the multiple system saves refrigeration costs by providing just the right temperature control for each room or case. For example, the cutting and wrapping rooms must maintain low temperatures but not as low as the coolers. Temperatures in the display cases vary from 60° in vegetables and meat cold cuts to -20° in the frozen food and ice cream cases, while most of the self-service meats are held right at 32°.

Three compressors spotted along the east wall of the basement serve the vegetable cases and the two east cases of the 50-ft. line of self-service meat fixtures. Cold meats and cheese are displayed in these cases. The vegetable walk-in cooler, which does not require a low temperature, also is served by one of these three units.

Compressor Arrangement

Eight additional compressors along the west wall serve the frozen food and ice cream cases, cutting room, wrapping room, meat cooler, dairy case, and the west three cases of the self-service meat line. All units are 1 hp. except for a 1½-hp. compressor which serves the frozen food and ice cream cases.

Lined against the west wall are dairy products, frozen foods, and packaged ice cream cases.

The Wagey Drugstore, leased by Harold Wagey, occupies a 30 x 85-ft. corner location in the building and is served by the same full-view glass front which extends along the front of the supermarket. In addition, to a double glass door main entrance, there is a glass door inside connecting with the supermarket and framed in 20 ft. of glass wall which forms part of the drugstore-supermarket partition.

A 10-hp. Frigidaire refrigeration unit is located in the basement to provide air conditioning for the drugstore. Ductwork leads to three circular vents located in the acoustic ceiling and with chrome-plated grille coverings matching those of the recessed fluorescent and cold cathode light fixtures.

Other Equipment

A take-out bottled beverage section is maintained between the front end of the fountain and the candy and tobacco cases, while directly opposite the beverage section and fitted against the booths in the center of the floor is a 7-ft. Weber self-service case for packaged ice cream and frozen confections. This fixture catches traffic on both main aisles of the pharmacy.

The new 30-ft. Bastian-Blessing fountain is all stainless steel save for the front bar and back bar cornice. Finish is in the same blonde wood as all other wall fixtures, display islands, and cases in the modern store. A stainless steel and glass cabinet on the back bar provides for sanitary handling of pies and other pastries.

Electric fixtures, such as toaster, steam table, coffeemaker, malt machines, etc., also are of stainless steel. All appliances and dispensing units are on the back bar, while the inside of the front bar is equipped with shelves and compartments for dishes, napkins, etc. Menus are inserted in grooved guides at the top of the back-bar mirror and are floodlighted by fluorescent tubing concealed in the back-bar cornice.

A swinging doorway at the back of the fountain connects with a modern kitchen equipped with range, vegetable sinks, work table, and food storage compartments including refrigeration for meats and other perishables.

A feature of the refrigeration equipment is an 8½-cu. ft. refrigerator for auxiliary storage. This has been placed near the kitchen door on the fountain side to save steps for fountain employees in procuring butter, cold meats for sandwiches, etc.

Ackerman's Beauty Salon occupies leased space directly back of the drugstore. For air conditioning, it has installed a self-contained water-cooled unit.

To Seek Code OK by N. Y. Cities

NEW YORK CITY—The ASA-B9 safety code and its acceptance in New York state was described at a recent meeting of the Empire State Association of the Refrigeration Service Engineers Society by James White, chairman of the state group's code committee.

After his talk, a member of each chapter was appointed to assist White in bringing the code before each community or city that may be contemplating a code or may be acceptable to adopting this code.

Self-Serve Meat

Attractive Wrap, Informational Label Boosts Its Popularity

ROCKVILLE CENTRE, N. Y.—Shopper preference for pre-packaged meats has caused sales increases of from 30 to 50% in departments where self-service equipment is installed, Thomas A. Donahue, meat sales manager of the H. C. Bohack Co., declared recently.

Speaking at the opening of the new Bohack supermarket here, in which 36 ft. of self-service meat cases are installed, the chain official pointed out that shoppers prefer self-service because service is quicker.

He added: "It's just a matter of picking out what you want. And, too, meats are more attractive when they are neatly packaged. Customers often buy enough for two or three days at one time, because the cuts look so tempting."

Another feature that customers like, he declared, is that they find all essential information on the label, including weight, cost per lb., and total cost. This saves them the embarrassment of having to refuse meat after selecting it when they find it is too expensive for them.

Bohack, which claims to have tried self-service meats as far back as 1927 (discontinued because of unsatisfactory wrapping materials and refrigeration facilities) now has 42 of its 279 stores in Brooklyn and Long Island set up with self-service meat departments, Donahue asserted.

He said the chain intends to put such departments in all new markets and to convert the older ones as rapidly as possible.

Only drawback from the store's point of view is that self-service equipment takes up more space than counter service, Donahue said, and space is an important factor in metropolitan markets.

Despite the trend to self-service, the Bohack stores retain butcher-service counters for handling larger cuts of meat and special cuts.

Swift Mfg. Names 7 In Decentralization Move

HAZEL PARK, Mich.—Seven personnel appointments incident to a new decentralized production and sales setup of Swift Mfg. Co. here have been announced by K. M. Schaefer, vice president and general manager.

The company has named Fred W. Fisher head of the Stamping Div.; Joseph Rumpf, head of the Machine Div.; W. W. Pound, Ohio representative; Robert H. Wiegand, Jr., purchasing agent; Leonard J. Vick, head of accounting and office management; George J. Sullivan, traffic manager; and Alfred S. Szandzik, process engineer.

Fisher joined the company's executive staff last November after service with Ford Motor Co. and General Motors' Grand Rapids Stamping Div. Rumpf was associated with Bohn Aluminum & Brass Corp. for 23 years prior to entering the Swift organization six months ago.

The company said its output has been expanded to a point where it now supplies 56 basic industries with products ranging from sheaves, pulleys, fan blades, and plated hardware to stampings and machine work.

Servicemen!

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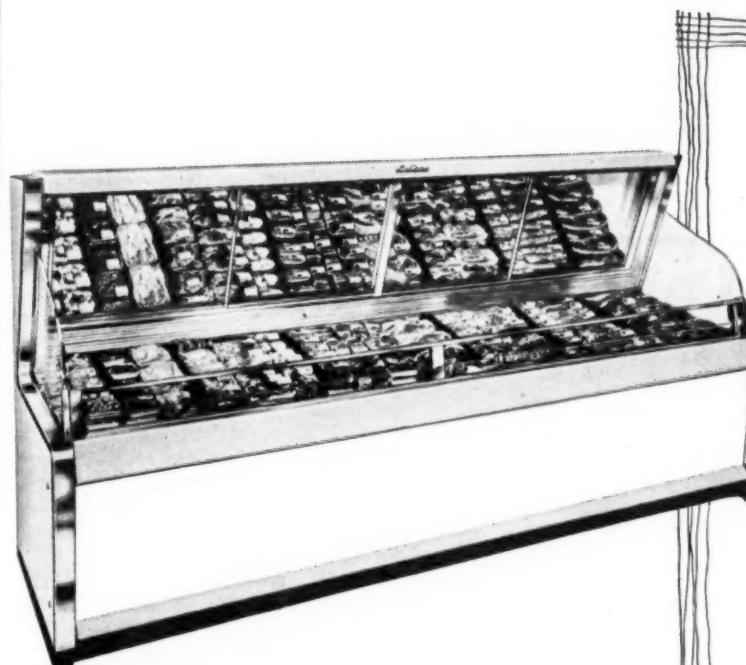
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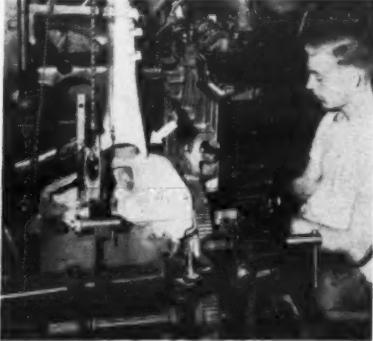
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IN COMPOSING ROOM MANY TYPE-CASTING MACHINES ADDED TO HEAT LOAD.



LINOTYPE MOLTEN METAL ADDED HEAT.

HOW HEAT LOAD WAS REDUCED: As shown in photo of Holland Evening Sentinel composing and press room (above left), an insulated exhaust system was devised to remove heat given off from molten type metal in metal pots of linotype and other type-casting machines. Three package conditioners totaling 13 tons handled rest of load nicely. Arrows indicate two units and exhaust ducts. Close-up of one linotype (above right) shows how exhaust hood, indicated by arrow, draws off heat from molten metal pot.

Whether It's a Publishing Plant or an Egg Hatchery --

Package Unit Flexibility Fits the Job

By C. Dale Mericle

HOLLAND, Mich.—Complete air conditioning of a daily newspaper plant, including the shop and pressroom along with the editorial and business offices, doesn't happen every day in the air conditioning industry, but it has been done in this small city by Charles F. Conrad, Chrysler Airtemp dealer, who installed four package conditioners for the *Holland Evening Sentinel*.

This installation presented some problems, as have some of the other air conditioning and commercial refrigeration jobs handled by Conrad, but thus far, at least, they've all been solved.

Air conditioning of the front offices in the newspaper plant represented no difficulty. For this a 3-ton conditioner was located in the corner of the lobby and business office. A duct comes off the top plenum of the conditioner cabinet and supplies cool air to the publisher's office, the editorial department, and the lounge

for the women employees, while two grilles in the duct just above the conditioner discharge into the lobby and business office.

But the composing room and pressroom presented an unusually high heat load which would have taken considerably more than the 13 tons which now comfortably handle the job had not other means been resorted to.

Production of the modern newspaper by conventional methods depends on the casting of molten type metal into lines of type for text and headlines in both the editorial and advertising columns. In addition, column rules and slugs are cast from molten type metal and complete pages are cast in circular stereotype plates from which the paper is actually printed on the tubular rotary press.

All this adds up to a considerable amount of heat. In the shop of the *Sentinel* there were 12 such heat sources: six linotype machines (including two of the latest models costing \$17,000 each), a Ludlow display type casting machine, a rule and slug caster, a gas-operated drier for stereotype mats, the main metal pot, an electrically heated former for the stereotype mats, and the stereotype caster.

Instead of trying to install enough air conditioning to overcome all these sources of heat, it was decided first to exhaust as much of this heat as possible, thus reducing the air conditioning load considerably.

Such an exhaust system was worked out by Conrad in collaboration with W. A. Butler, the mechanically minded publisher, and Ed Van Spyker, who does the sheet metal on Conrad's installations.

An L-shaped exhaust duct was installed in the shop and pressroom connected to a fan rated at approximately 2,000 c.f.m. which discharges through a window. Heat-collecting hoods were then located over the metal pots of each linotype machine as well as the other six heat sources in the space, the duct being insulated to retain as much of the heat as possible.

Besides removing the heat, the exhaust system provides another benefit by pulling out the noxious gases normally given off by the molten type metal.

In this connection Publisher Butler cautions that "cleanouts must be provided in such an exhaust system to remove the dust and other particles that settle out of the gases. If these cleanouts are not provided, and if the duct is not cleaned regularly, an explosion could eventually result."

With the heavy heat load taken care of by the exhaust system, the space is satisfactorily air conditioned by two 5-ton Airtemp conditioners and a 3-ton conditioner. The latter is connected to ductwork which also cools the large room used by newsboys to wrap and pack their papers. There is a manually controlled damper in this duct so that the air can be discharged forward into the shop to cool the linotype operators

and forward area of the shop or directed into the newsboys' quarters. It can also be set in varying proportions.

The newsboys come into the office to get their papers soon after the shop has closed down, so the air can be shifted from one room to the other without inconveniencing either group. Shoving all the air from the 3-ton machine into the single room cools it rapidly, and since this room is used by the newsboys for only a relatively short time each day, this arrangement is quite practical.

Another interesting application of a package air conditioner was devised by Conrad for the Zeeland Hatchery where he has also installed considerable refrigeration and air conditioning for other purposes.

Problem in this particular job was to cool a large storage room for eggs as brought in from the farms before

they are transferred to the incubator ovens. High humidity and a temperature of 55° F. were desired, according to Conrad, to obtain better control over quality.

This temperature requirement was met by a 5-ton Airtemp package unit in which the only change that Conrad made was to install a large drier.

"With the coil operating at so close to the freezing point (about 33° F.) there is danger of freeze-ups at the valve," he explains. "The large drier has prevented any such trouble."

The high relative humidity necessary to prevent drying out of the eggs while in this short-term storage is maintained by a separate humidifying unit.

"There's one thing about this installation," Conrad points out. "There was some fear that operating at such a low temperature—for an air conditioner—that the coil might ice up. It hasn't iced up yet and it proves to me there's plenty of coil capacity in the unit."

Other jobs that he's installed for Zeeland Hatchery include air conditioning of the main offices and low temperature freezing and storage rooms for the first extensive poultry operations.

Similar equipment for poultry processing has also been installed by Conrad for the Hamilton Farm Bureau, thriving cooperative enterprise with numerous ramifications located at Hamilton, Mich., about eight miles east of Holland.

The organization recently made some extensive changes in expanding its fresh egg operations, for which Conrad supplied the refrigeration and air conditioning. Three rooms are involved here—a refrigerated receiving room, the large candling, grading, and packaging room, which is air conditioned, and the storage room for packaged eggs.

Eggs brought in to the plant from the farms go quickly into the receiving room which is refrigerated to maintain quality of the eggs and prevent their losing any grade before they're graded and packaged.

Equipment for this consists of a Krack F-121-MA coil connected to a packaged 3-hp. Airtemp water-cooled condensing unit. To save space and because the high side is water cooled, the condensing unit package is located within the storage room itself and is directly below the coil.

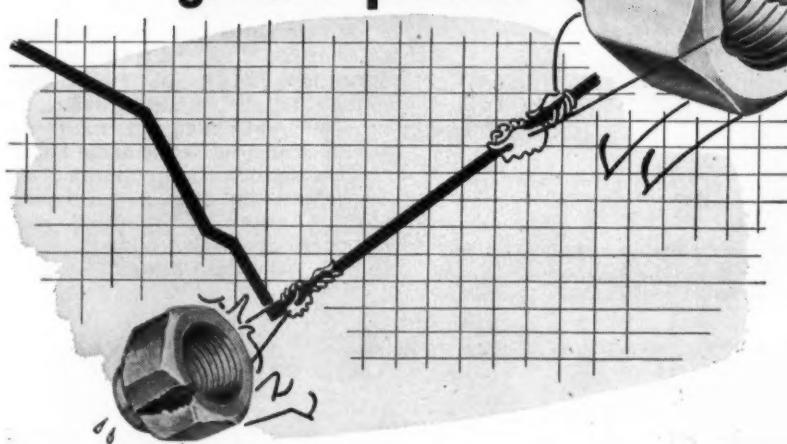
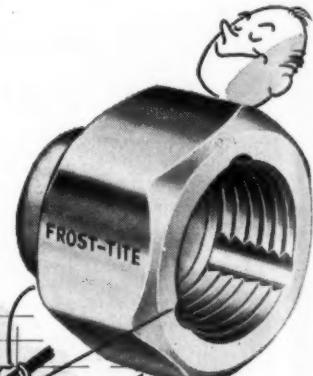
"Shortest run I ever had on a remote job," comments Conrad.

(Concluded on next page)

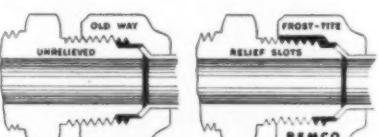
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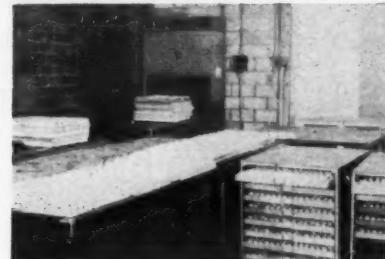
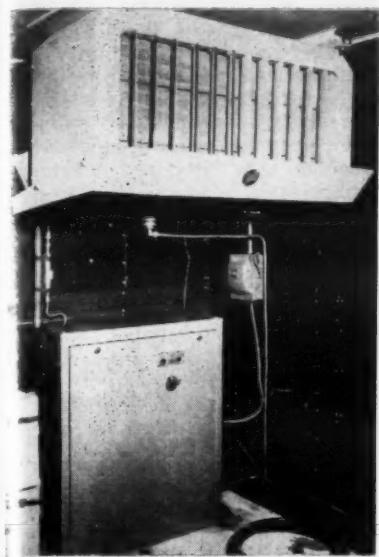
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EGG HATCHERY RECEIVING ROOM (above): A standard package air conditioner (a 5-ton Airtemp) maintains 55° F. and high humidity in the egg-receiving room for Zeeland Hatchery. Only change was larger drier.

FRESH EGG RECEIVING ROOM (left): New egg-receiving room at Hamilton (Mich.) Farm Bureau is cooled by means of Krack coil and 3-hp. packaged Airtemp condensing unit. Latter is water cooled and is located directly below coil in the refrigerated space.



FRESH EGG GRADING ROOM: Quality control and comfortable temperatures are provided for the egg grading, candling, and packaging operations of Hamilton Farm Bureau by 8-ton Airtemp year-round conditioner connected to duct directly above "line." *

Close Temperature, Humidity Control Are Keys To Maintaining Egg Quality

(Concluded from preceding page)

At first thought the observer might think the coil and unit were considerably over-size for the job, considering the size of the room and the medium temperatures to be maintained.

However, Conrad points out there's considerable service and product load, and, even more important, it's essential to keep the temperature difference between coil and air as low as possible to maintain high humidity and prevent drying out of the eggs with a consequent loss in grade and quality.

From the receiving room eggs go next to the air conditioned grading, candling, and packaging room where operations are conducted on an assembly line basis in an area that measures 25 ft. wide by 90 ft. long.

Prime purpose of air conditioning here is to maintain quality of the eggs by keeping an even 72° to 73° F. temperature, but in addition comfort cooling for the employees is an important function, too.

At one end of the room against an outside wall, Conrad located an 8-ton Airtemp package unit. An L-shaped duct comes off the unit and

runs down the center of the ceiling the long way of the room directly over the "line." Ceiling outlets are spaced along the duct to discharge conditioned air into the space.

An air intake from the outside connects to the conditioner to supply fresh air. The adjustable damper is normally set to admit 25% fresh air to the system. This is to be a year-round job, according to Conrad, who says hot water coils will be put in the unit when installation of the plant's new heating system is completed.

As part of this job a Krack blower unit was tied into an existing ammonia system to maintain 45° to 50° in a cooler for short-term storage of packaged eggs after they come off the line.

In this connection Conrad comments that "at one time eggs were usually stored at 35° F., but this resulted in sweating when the eggs came out of the cooler, which often led to mold growth and degrading. Now we know that eggs can be satisfactorily stored at the higher temperature and they won't sweat when they're taken out."

Besides air conditioning and jobs

like the foregoing Conrad gets into other phases of commercial refrigeration such as the installation recently completed for Pete Botsis' beer store and drive-in restaurant at the southwest edge of town.

In addition to installing a 5-ton package conditioner to cool both the restaurant and the beer store, he erected a 16-door stainless steel reach-in box behind the counter that will hold 3,000 bottles of beer and soft drinks.

The reach-in was built into the wall of the cooler by using the front framework of two 90-ft. Puffer-Hubbard boxes. Eight doors wide and two high, the reach-in was equipped with metal shelving by Conrad, who also had his sheet metal man work the stainless steel front to cover the entire rear wall partition.

Inside the box are two Betz half-round ceiling mounted unit coolers connected to a 2-hp. Airtemp condensing unit. Two conventional cold-storage doors are provided for the cooler, one at the side and the other in the rear for loading.

With jobs like these plus regular service work, Conrad manages to keep himself and two employees busy pretty much the year-round. He has three well equipped service and installation trucks, one for each of the men and one for himself. He confines his service work mostly to commercial and air conditioning although he occasionally takes on domestic in the off-season and as an accommodation to his commercial and air conditioning customers.

"Usually we're too busy during the summer months on our regular service and installation to have time for household jobs," Conrad says.

Being more interested in sales and

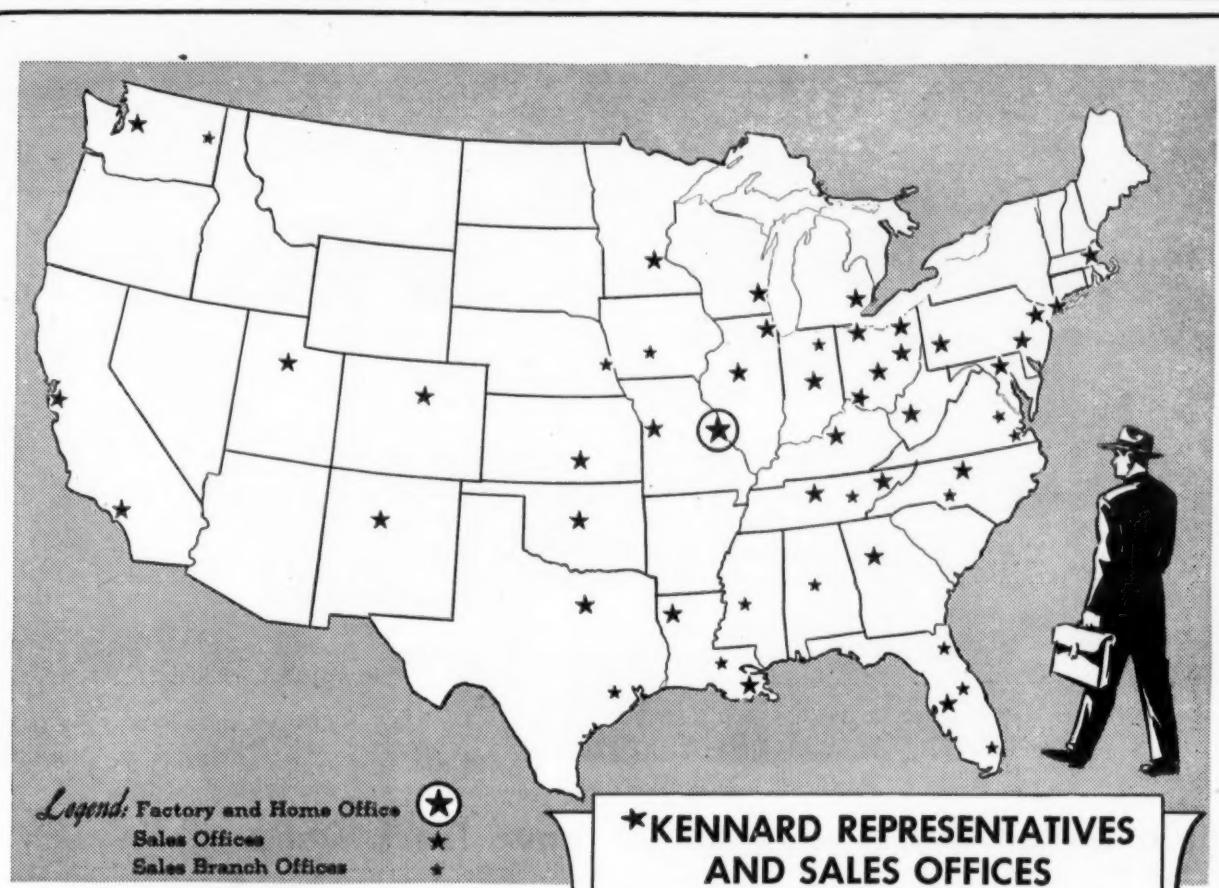


SPECIAL CASE FOR DRIVE-IN: Besides air conditioning Pete Botsis' new drive-in and beer store at Holland, Mich., Conrad devised this 16-door stainless steel reach-in box that will hold 3,000 bottles of beer and soft drinks by using the front framework of two 90-ft. reach-in boxes. Elaine Botsis shows how handy the arrangement is.

tenance agreements none of these are on a "contract" basis.

"When we first approached our customers with the idea of signing them up for a formal maintenance contract, they all said they'd rather not bother with a contract even though they thought the inspection and maintenance idea was sound. They said they preferred to leave the problem up to me and pay what it cost."

"So we make our inspections regularly and do whatever necessary, and then bill the customer each time. This has worked out satisfactorily for both the customers and ourselves."



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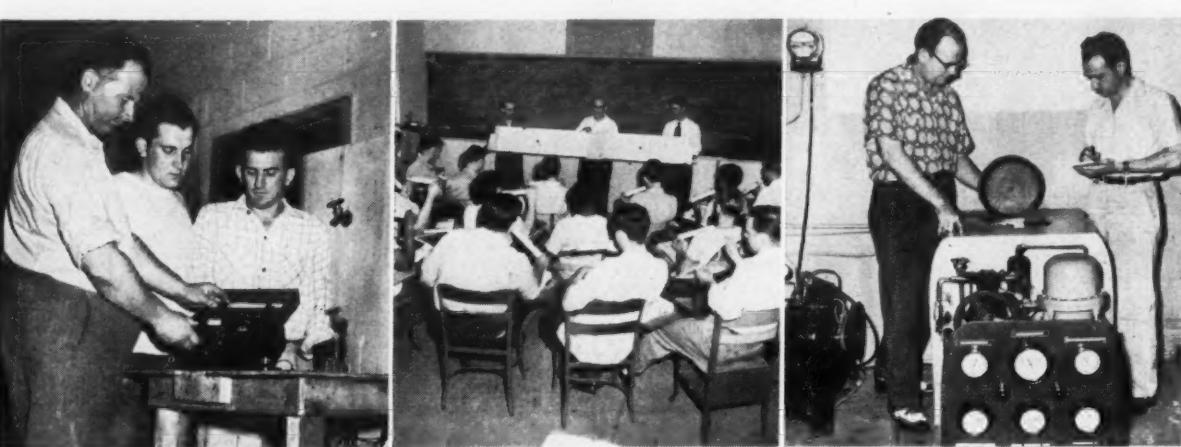
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HEAT PUMP COURSE: George Clark, Detroit Air Conditioning Institute head, shows students how to calibrate new type heat pump.

CALCULATION PRACTICE: Students, aided by giant-size replica of slide rule, learn to make computations on their pocket versions.

LOW-TEMP STUDY: Two students inspect a compound compression low-temp system capable of producing temperatures as low as -130°.

Here To Help Students Learn Faster, They Believe—

Trade School Courses Should Stress More 'Why'

DETROIT—Courses at the Detroit Air Conditioning Institute here are designed not only to teach the "how" of refrigeration and air conditioning, but also the "why," says George Clark, director of the institute, and courses have been designed in such manner because of demands from the field.

Many trade schools do a good job of teach the "how" of refrigeration and air conditioning application and service work, but give very little attention to the "why" of it, Clark declares. On the other hand, it is his opinion that many colleges have inadequate refrigeration courses and

very little to offer in the way of instruction on air conditioning. And the emphasis in college courses is almost 100% "why" and very little "how."

A refrigeration contractor told me," Clark related, "We don't mind helping new men get started in refrigeration, but these men that are coming out of schools don't have enough foundation to build on."

The Detroit Air Conditioning Institute director was vice president of one of the first independent service organizations in Detroit to operate from a businesslike shop. He had a mechanical engineering training in

back of him and reasoned that men who had the part of a mechanical engineering training which helped him in refrigeration, heating, and air conditioning would likewise have a proper background to become "good men."

He feels that no practical amount of laboratory work or practicing "how" can possibly duplicate all the conditions to be met in the field nor teach how to meet new problems as they come up.

Likewise, Clark believes that no technical training can be a substitute for experience. He says that the technical training, however, will enable a man to benefit by experience to such a degree that the technically trained man in three months to a year may be far superior to a man without the technical training, but with 20 years of experience. To a large extent experience is used to establish confidence on the part of the technically trained man.

The Detroit Air Conditioning Institute training is about 75% "why" and 25% "how." This large "why" includes much more of the technical coverage than many colleges include.

Clark believes a college course plus six months to a year at Detroit Air Conditioning Institute would give good coverage of the technical and cultural phases of an education with enough practice to enable the student to enter the field with a minimum of lost motion. For men who cannot afford the five or six years time required for this program, the technical phases with a reasonable amount of practice may be covered in 18 months at Detroit Air Conditioning Institute, he declares.

HERE'S TYPE OF JOB WHERE MORE 'WHY' TRAINING HELPS

Clark cited as a typical example of the value of the "why" in technical training, a refrigeration and air conditioning contractor in Indiana had a prospect who wanted a locker plant installation made. The contractor, being non-technical, thought that a

15-ton air conditioning condensing unit should do the trick. The sales manager at the factory where the machine was made recommended the installation also. The installation was made but had to be pulled out after the field engineers found the machine only produced 1.6 tons of refrigeration in locker plant use. The machine was inherently unsuitable.

Said Clark, "The technically trained man, such as a graduate from Detroit Air Conditioning Institute, should know the machine was improper for the job, or in 30 minutes could make calculations to determine what its possibilities were, as witness the problem taken from a Detroit Air Conditioning Institute final exam."

WHY TRAINING PERMITS RAPID, ACCURATE ESTIMATE

"A certain 5-cylinder 'F-12' compressor whose bore equals its stroke turns at 1,725 r.p.m. and develops 16.5 tons of refrigeration when operating at 52 p.s.i.a. with 50° F. suction gas and when condensing at 130 p.s.i.a. with a compressor discharge temperature of 110° F. Its volumetric efficiency under these conditions is 85% and it is using 15-hp. 80° liquid to TXV."

"The same compressor used for locker storage work has a volumetric efficiency of 50% when its suction pressure is 16 p.s.i.a. and the suction gas enters the compressor at 10° F. with a 130 p.s.i.a. and 140° F. discharge condition. The M.E. at the low suction pressure is two thirds of the M.E. at the original conditions. At the new condition the compressor speed is 1,760 r.p.m.

"Find:

- (a) Original M.E.
- (b) Bore and stroke
- (c) Tons of refrigeration developed in locker storage work
- (d) Hp. required in locker storage work."

Clark cited the typical problem above to show that the direct connected air conditioning condensing unit is very decidedly unsuitable for the locker plant job. He feels that 30 minutes of slide rule and pencil pushing based on the technical training of Detroit Air Conditioning Institute would have saved the contractor in the above instance referred to, a loss of several hundreds of dollars.

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Q. What Are Keys To Preventing Moisture from Condensing on Building Walls During Winter?

Bradenton, Fla.

Editor:
A friend of mine, mouse-trapped me the other day and after I tell you about it, you may have the answers. This friend approaches me with an innocent expression and said;

Art, I'm building a room on my house. What do you think of insulating the side walls as well as the ceiling?

replied, "By all means. The more insulation, the easier the room will be to keep cool in the summer—warm in the winter."

He came back at me with the information that a friend of his, from up north, told him never to insulate side walls! It seems this last named friend is on the high road to riches simply by tearing out rotted sidewalls and replacing them with new—sans insulation. The insulation drew moisture and caused the construction to rot out.

After about a week of mulling it over, I called by friend and said;

You told me the insulated sidewalls rotted out, but the ceiling didn't, and the cause was air conditioning. Now the vapor seal would be next to the weather board and the

cause of rot would be moisture, deposited because of a difference in vapor tension. With air conditioning the difference in temperature would not be enough to set up much difference in vapor tension. The temperature difference would be greatest at the ceiling and there they have no trouble!

"Why? It strikes me—air conditioning (summer) is not causing the trouble. In the winter the t.d. would be much greater than in the summer, reversing the whole situation, i.e. The ceiling t.d. would average less while the walls, where the trouble occurs, would have the greatest t.d. And in winter with the cold on the outside and the heat on the inside, the vapor seal is on the wrong side of the insulation."

My friend thought it over and decided that it made sense.

Now, we realize it is possible to have a difference in vapor tension without any t.d. But if air conditioning cooling is causing the trouble with houses why do we not have great difficulty with all sidewalls on insulated applications? Any comments?

A. R. POOL

A. Proper Insulation and Heating Plant To Keep D.B. Temperature Above D.P. Temperature.

Dear Mr. Pool:

Your letter shows clearly how confusing the subject on condensation of homes and buildings can be. I assure you that it is not an easy subject to master, but once the facts are known it is simple to meet it. In order to get some idea of this subject, it is necessary to know something about the fundamentals governing water vapor.

What is water vapor? Water vapor is the moisture in the atmosphere. Water vapor or moisture is present in all air in various amounts. Water vapor is steam at low pressure and low temperature. Water vapor is pressure, known as vapor pressure. The greater the amount of moisture, the greater is the vapor pressure. In general the higher temperature air has a greater amount of moisture than lower temperature air. Therefore the higher temperature air has a greater vapor pressure than lower temperature air.

To further clarify the subject, three factors must be considered. The first is the dry bulb (d.b.) temperature of the air. The d.b. temperature of the air is that temperature which is noted by an ordinary thermometer.

The second is the dewpoint (d.p.) temperature of the air, which is the measure of the amount of moisture in the air.

The third is the relative humidity (r.h.) which denotes the amount of moisture at any specific condition of the air.

Also, the amount of moisture is expressed in grains per pound or grains per cu. ft. of air. The d.b. temperature is always higher than the d.p. temperature except when

the air contains all of the moisture that it can hold and no more, then the temperatures are the same and the relative humidity is 100%.

Knowing the above facts, we can proceed to find out how condensation occurs on walls, ceilings, and windows and how it can be eliminated.

When the d.b. temperature of the air is lowered or is cooled below the d.p. temperature, the air releases some of its moisture in the form of free water or condensation.

When the d.b. temperature of the surface of any wall, ceiling, or window is below the d.p. temperature of the air in contact with such wall, ceiling, or window, the air will give up some of its moisture on such surfaces in the form of frost or condensation, depending upon the d.b. temperature of the inside surfaces of the walls or windows.

Now let's apply the above fundamentals to homes which this discussion is about.

The general reason why condensation does not occur on ceilings is that the surface temperature of the ceilings is the highest in any home and that it is also higher than the d.p. temperature of the room air. Heat always rises and usually there is another floor above it or an attic space, which temperature is higher than the outside temperature with which the walls and windows are in direct contact.

The walls of a home are always lower in temperature than the ceiling and unless a heating system is provided to keep all inner wall surfaces at proper temperatures, there may be danger of condensation. The heating system employed is the answer as to whether condensation will occur or not, as this heating is what keeps the wall temperature up.

Condensation on inner walls is not dependent upon whether insulation is provided or not. While it has the tendency to keep the walls warm, insulation's chief function is to place resistance in the wall structure to cut down on the heat loss. There are insulating materials which have a greater resistance than others in absorbing or letting moisture through.

WHERE USAGE IS NORMAL

For instance, let's take a home that is heated in the winter season, in which the following conditions are to be carried:

The inside d.b. temperature is 70° F. The outside d.b. temperature is -5°. No humidifier is used.

In the winter the d.p. temperature in the home is greater than the outside, therefore, the flow of moisture is from the inside to the outside. In the summer it's the reverse.

Under such conditions and normal usage of home activities by the occupants, the inside relative humidity will be about 10%. So that inside there will exist a d.p. temperature of 13°, which also means that the

inside air has .80 grains of moisture per each cubic foot. The outside air at -5° has practically no moisture at all.

Under such conditions no matter what type of a heating system is used, the d.b. temperature of the inside surfaces should be greater than 13°. And in such a case no condensation will occur. The vapor pressure on the inside is .07 in. of mercury and on the outside is .02 in. of mercury. With such small difference in vapor pressure between the inside and the outside the vapor movement to the outside is small. But as long as the vapor is not condensed, there is no danger of condensation within the home.

But suppose that the heating system used does not heat evenly about all rooms and the d.b. temperature of the inside surfaces of the walls or glass is below 13°, then the vapor in the air in the rooms will condense on such portions and will be noted by ice or frost on the inside walls or windows.

WHERE WASHDAY IS FACTOR

Let's take the case No. 3 which is the same as No. 1 except that a humidifier is used to carry 30% relative humidity at the low outside temperature. In this case the d.p. temperature in the house will be 37° and the inside air has .26 grains of moisture per cu. ft. The inside vapor pressure is .22 in. of mercury and the outside is still .02 in. of mercury or a difference of .24 in. of mercury.

In this case the inside surface temperature must be kept above 37° in order to eliminate condensation. And on wash days the relative humidity in this case will be increased considerably over case No. 2, which again raises the d.p. in the rooms and thereby offers a greater chance for condensation.

From the above we can readily lay down a few points to meet the problem of condensation, of how it can be avoided, or lessened.

1. Condensation usually occurs where an improper heating system has been installed. Therefore, select a heating system which will heat every portion of all walls and windows and maintain the temperature of all inside surfaces as high as possible. If hot air is used it will be advantageous to take in about 25% of outside air at all times, in order to create ventilation in the

rooms and to place all rooms under pressure.

2. To eliminate condensation on single glass windows apply the heat directly below the windows. If this cannot be done use double-glazed windows.

3. Insulation should be used in all walls and above ceilings in order to cut down on the heat loss. Insulation once wetted loosens its insulation value.

4. In order to protect the insulation and to cut down on the damage done by condensation under varying conditions, it is necessary to apply vapor barriers. The material usually used is aluminum foil. A layer of aluminum foil should be placed directly behind the plaster and another layer between the sheathing and clapboards. The insulation being between the layers of aluminum foils. In this manner if condensation should occur on the inside it would only affect the plaster, while on the outside, the clapboards. These are easily repaired if a moisture problem should occur.

5. No condensation problem should occur with summer air conditioning, unless the system is not properly designed. Condensation may occur on the inside surfaces only when the d.b. temperature of the cold air supplied to the room is lower than the d.p. temperature of the room air. If such is the case the system is not properly designed.

6. Condensation inside of homes and buildings can be entirely eliminated by installing the proper heating system in conjunction with proper construction design and materials. The only point to keep in mind is to heat the inside surfaces above the d.p. temperature of the room air.

JAMES J. LASALVIA



For the First Time, a completely automatic ammonia system for freezing temperatures

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THERMOBANK for Ammonia furnishes the Refrigeration Industry for the first time the only completely automatic (self-defrosting) Ammonia System for Temperatures below 32° F, completely eliminating Water Spray, Brine Spray, Electric Heater, and all manual attention from the operation of the system.

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KRAMER TRENTON CO. Trenton 5, N. J.

Refrigeration Problems

and their Solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

Air and Humidity (3)

In the two previous instalments, we studied mixtures of air and water vapor. We learned what the dry bulb and dewpoint temperatures mean; what they are and what the difference is between "Relative Humidity" and "Percentage Humidity" and between "Absolute Humidity" and "Specific Humidity."

We found that Relative Humidity and Absolute Humidity are based on the amount of moisture in one cubic foot of a mixture of dry air and water vapor; and Percentage Humidity and Specific Humidity are based on the amount of water vapor in a mixture that contains one pound of dry air.

WHY POUND OF DRY AIR?

We usually deal with rooms or other spaces that contain definite volumes of air, so why talk about "pounds" of air? It must be remembered that when a mixture of dry air and water vapor is warmed, both the air and the vapor expand and become "lighter" per cubic foot; moreover over their separate or "partial" pres-

Temp- erature	Table 1 PARTIAL TABLE OF PROPERTIES OF AIR AND WATER VAPOR									
	Saturated Water Vapor	Dry	Mixtures of 1 lb. of Dry							
In. of Mercury	Specific	Density	Air	Air and Sat. Water Vapor						
Vac.	lbs. per	Vol.	Grains	Spec.	Volume	Spec.	Volume	Spec.	Volume	Spec.
Temp.	sq. in.	cu. ft./	cu. ft.	per cu.	cu. ft.	cu. ft.	cu. ft.	cu. ft.	cu. ft.	cu. ft.
	Abso.	Abso.	lb.	ft.	cu. ft.	per lb.	cu. ft.	per lb.	cu. ft.	per lb.
15	29.84	.0806	.0396	7144	.000140	.98	11.959	11.99	.001681	11.77
20	29.82	.1027	.0504	5662	.000177	1.24	12.085	12.13	.002144	15.01
25	29.79	.1303	.0641	4509	.000222	1.55	12.211	12.27	.00272	19.04
32	29.74	.1803	.0886	3305	.000303	2.12	12.389	12.46	.00378	26.40
40	29.67	.2477	.1217	2445	.000410	2.87	12.591	12.70	.00520	36.41
70	29.18	.7392	.3626	868.0	.001148	8.04	13.349	13.69	.01578	110.4
90	28.50	1.4219	.696	467.9	.002131	14.92	13.854	14.55	.03109	217.6

sures and the total pressure, rise. Calculations become quite awkward, with volumes and pressures changing.

Moreover, the amounts of air and moisture by weight, are the determining factors, so it is easier to deal with pounds of dry air with vapor mixed with it, and then if necessary, convert to cubic feet after the calculations are made.

In the two previous issues, reference was made to Steam Tables and Psychrometric Tables. The available tables vary according to the author or the needs for which the particular table was compiled; but Table 1

is a partial table that shows some of the values that are available from such tables.

The "Temperature °F" is the Dew-point temperature when referring to the first six columns under the general heading "Saturated Water Vapor." These are merely taken from Steam Tables and are independent of the air.

The seventh column refers to Dry Air only, without moisture, so, for that column "Temperature °F" may be considered at Dry Bulb Temperature.

The last three columns refer to

mixture of Dry Air with Saturated Water Vapor, so for these three columns, "Temperature °F" is the actual temperature of the mixture but at the Dewpoint temperature, that is, the saturation or condensing temperature of the water vapor.

All of the values in the last four columns of this partial table are based on "Standard Air" at atmospheric pressure at sea level of 29.92 inches of mercury (barometric pressure) or 14.696 p.s.i.a.

"Saturation Pressure" could also have been called "Vapor Pressure of the Water Vapor at Saturation." For purposes of comparison it is given in three forms, Inches of Mercury Vacuum (as a compound gauge would read it), Inches of Mercury Absolute (as a barometer reads it), and in Pounds per Square Inch Absolute (as a gauge calibrated to read in absolute instead of "gauge" pressure) would read it.

Ordinary gauges are not sensitive enough for these extremely low pressures, so vapor pressures of water vapor are usually shown as inches of mercury absolute or barometric pressure, in steam tables and psychrometric tables.

Water vapor is extremely light, so most tables show only the Specific Volume instead of Density, as the latter are such small decimal fractions. Also the volume values are more useful for most calculations.

SATURATED VAPOR WITH ONE POUND OF DRY AIR

Please note that specific volume of dry air only as shown in column seven is based on a standard atmosphere of 29.92 inches of mercury. Column eight is also, but includes the air and the water vapor, so there must be slightly less dry air in order to allow some partial pressure for the water vapor in the mixture.

Specific Humidity of the mixture is given in both pounds per cubic foot and, as usually shown in tables, grains of moisture per cubic foot, which is 7,000 times column nine.

WHAT THE TABLES TEACH US

It is not our purpose to attempt to trace calculations through the psychrometric tables, but a few simple examples are shown—less to illustrate how the tables may be used, than to show what happens to air and water vapor mixtures under various conditions.

As previously shown, if atmospheric air is at 90° (the dry bulb temperature) and the dewpoint temperature is found to be 70°, the Relative Humidity is the vapor pressure corresponding to 70° (from the table .7392 inches of mercury) divided by the vapor pressure at 90° (from the table 1.4219) or .52, or 52%.

Again referring to the tables, we see that the density of water vapor at 70° is .001148 pounds or 8.04 grains of water per cubic foot. At 90° the density is .002131 pounds or 14.92 grains of water per cubic foot. That is, at 90°, one cubic foot could hold 14.92 grains of water, but actually it has in it only 8.04 grains, for it holds no more than the density of water vapor at its dewpoint temperature. If we divide 8.04 by 14.92

we again get 52%, the relative humidity.

So we can find the actual amount of moisture in the air, that is, its Absolute Humidity, if we multiply the density of saturated water vapor corresponding to the dry bulb temperature (90°) by the relative humidity. Or, if we know the dewpoint temperature, we can simply look up in the tables the density of saturated water vapor at the dewpoint temperature (in this case 70°) and read directly the weight of moisture per cubic foot—which is the Absolute Humidity.

Since column 10 is the Specific Humidity, that is, the weight of water vapor in a mixture of saturated water vapor with one pound of dry air, we can multiply the Specific Humidity by the Percentage Humidity, and get the weight of the moisture mixed with one pound of dry air.

We found that the Percentage Humidity for a 90° dry bulb and a 70° dewpoint, was found by dividing the Specific Humidity at the dewpoint temperature (70°) by the Specific Humidity at dry bulb (90°). In this case it was 110.4 divided by 217.6, or 50.7% Percentage Humidity.

RELATIONSHIP BETWEEN ABSOLUTE AND SPECIFIC HUMIDITIES

Please note too, that if you divide the Specific Humidity at dewpoint temperature (and this is the actual weight of the moisture in a mixture of one pound of dry air and saturated moisture) by the volume of the mixture (column eight), you come back to the density of saturated vapor, or Absolute Humidity.

For example, at 70° dewpoint, the Specific Humidity is 110.4 grains, and the volume of the mixture is 13.69 cubic feet per pound, so 110.4 divided by 13.69 is 8.04 grains, the Absolute Humidity.

Next week we will see what this table can tell us about humidity conditions in a refrigerator, and what information it gives on why a small, out-of-balance evaporator causes foods to dry out.

G-E Appoints Richardson And Klein to Coast Posts

SAN FRANCISCO—G. L. Richardson and Philip Klein have been appointed Pacific district service supervisor and service representative, respectively, for the General Electric Co.'s appliance and merchandising department.

Richardson joined the company at Bridgeport, Conn., in 1946. He was transferred to San Francisco earlier this year as district service representative.

Klein was formerly appliance service representative at Chicago. He came with the company at Lynn, Mass., in 1943.

Reese & Long In New Location

NEW YORK CITY—Reese & Long Refrigeration Products, Inc., has announced that it is now located at 1891 Park Ave. between 128th and 129th Sts. here.

BAKER VALVES and FITTINGS

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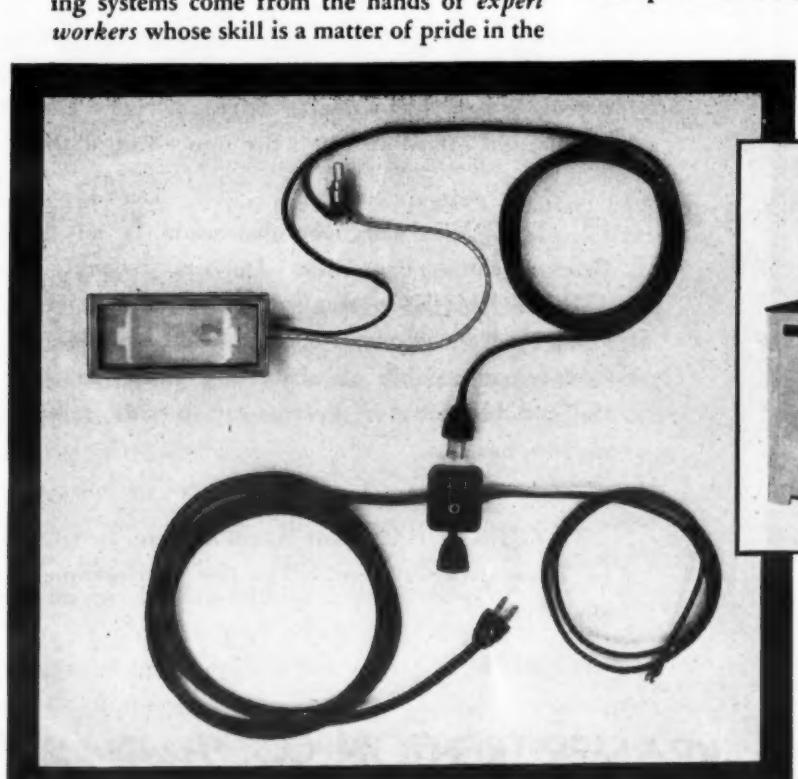
We believe so thoroughly in the high quality and dependability of Baker Valves and Fittings that we specify them for all Baker Compressors and Condensing Units. You, too, can be certain that these products, backed by 44 years experience, will give your customers long service and satisfactory operation.

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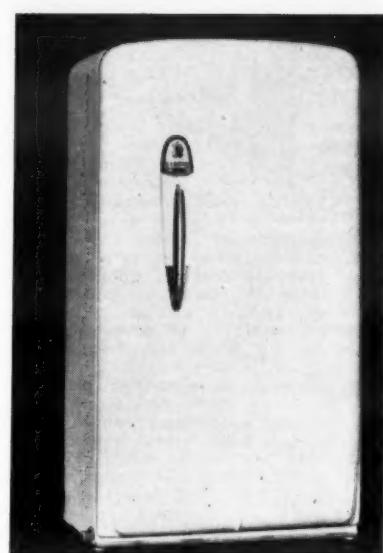
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OPEN: The deluxe model 1131 Gibson refrigerator for 1951 exposes the featured door racks, Butt'ry, Freez'r Locker, Swing'r Crisp'r, and Touch-A-Tap.



CLOSED: The Gibson model 1151 shows the Pres Toe at lower left that automatically opens and closes the door.

model G range feature the Magic Ups-A-Daisy.

Model H provides completely automatic control of its two ovens, the Magic Ups-A-Daisy unit—up or down—and the appliance outlet.

Both ovens have the "ConSealed" oven units built into the floor of the oven and covered with stainless steel resulting in better heat distribution and easier cleaning.

Seven-Speed push-button controls offer a wide variety of speeds for surface and deep-well cookery. Other features of the range include functional handles, "Minute Watchman," full-width fluorescent light and push-button selector switch for automatic control. Model H carries a suggested retail of \$399.95.

Basic features included in all 1951 models include the banquet size oven and 7-heat surface units. All models are of heavy-duty construction with the entire exterior of each model of acid and chip resistant tannin porcelain.

Gibson's "Touch-A-Tap" feature for the provision of cold drinking water at the touch of a tap built into the refrigerator has been continued as a top feature of the 11-cu. ft. model 1131, which carries a retail of \$379.95.

The top model, Model 1151, again features "Pres-Toe," the pedal operated door opener and closer. In the 1151 Gibson also introduces a newly designed Super Locker providing 109 lbs. of frozen food capacity.

The Super Locker combines the regular capacity of the 54-lb. Freezer Locker with the 55-lb. capacity of the Fresh'n'r Locker by the insertion of a plastic tray into the Fresh'n'r Locker. Model 1151 is listed at \$399.95.

Model 1101 has a full-width 54-lb. Freez'r Locker, Fresh'n'r compartment, door racks, Butt'ry, and Swing'r Crisp'r. It carries a suggested retail list of \$319.95.

Model 831 is a moderate priced leader and the only 8-cu. ft. box in the line. This model features full-width Freez'r Locker and a full-width Fresh'n'r compartment for moist cold storage. It is priced at \$259.95.

In the lower price field, Gibson offers the trade two new full-length 7-cu. ft. models. Model No. 701 with full-length door and interior is priced at \$219.95.

Model No. 721 provides a full-length door and interior and an exclusive clear plastic Swing'r Crisp'r to replace the Tilt-Bin. A decorative glass over the full-width Freez'r Locker enhances the appearance of this model. Model 721 is priced at \$229.95.

Both 7-cu. ft. models are available with right or left hand doors at the same price.

Gibson's deluxe Model H range is the finest and most complete range ever built by Gibson. It and the

Government Contracts

The following data on government contracts is published by AIR CONDITIONING & REFRIGERATION NEWS to give manufacturers, suppliers, and contractors an opportunity to bid on contracts being let by the U. S. Department of Defense as well as other branches of the Federal government. Data on contracts that have already been awarded is also published so that

PROCUREMENT INFORMATION

Individuals and companies who are interested in bidding may obtain complete bid sets containing more detailed data including specification, packing, delivery, and other requirements by a written request to the issuing office. Such requests should cite the description, applicable invitation number, or other reference and the opening date, etc.

DEPARTMENT OF DEFENSE

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following ordnance districts, arsenals or armories. Complete information can be obtained by written request or personal call on the ordnance district office nearest you—it's address is on file in your nearest Department of Commerce field office.

Invitation No. Quantity Opening Date

Commanding Officer, Naval Supply Depot, Mechanicsburg, Pa.	Attn. Code 778B	Quantity	Invitation No.	Opening Date
Gages, Pressure and Compound	235 ea	762449-A	18 Oct 50	
4 and 1-1/2 In. Dial-1-In. Bottom Connection, Various Types and Ranges with Protector for Gasoline and Salt Water Service. Manning, Maxwell & Moore Part No. 1172 or Equal	905 ea	763685	20 Oct 50	
Thermometers:	30 ea	763685	20 Oct 50	
Dial	356 ea	763685	20 Oct 50	
Industrial	905 ea	763685	20 Oct 50	
Etched Stem	1 ea	763685	20 Oct 50	
Officer-in-Charge, Navy Purchasing Off., Washington, D. C.	100	2754-8	26 Oct 50	
Boiler, Hot Water Heating Complete				
Commanding Officer, U. S. Naval Air Station, Corpus Christi, Texas				
Expansion Valve—Low Temperature, to be used with Freon Refrigerant	15 ea	216-26	12 Oct 50	
Water Cooling Tower to be used for Refrigeration Installation	2 ea	216-26	12 Oct 50	
Condenser Unit for Refrigeration Installation	4 ea	216-26	12 Oct 50	
40 GPM Pump for Installation with Refrigerator Condensing Units or Equal	2 ea	216-26	12 Oct 50	
Sight Glasses, Liquid Line Sight Glass for Determining Charge of Freon in System	2 ea	216-26	12 Oct 50	
Dehydrator, Refrigerant Dryer 5 H-P, Rating	8 ea	216-26	12 Oct 50	
Valves, Solenoid Fog Control of all Non-Corrosive Refrigerants	10 ea	216-26	12 Oct 50	
Locker Plates, Sheet Steel, Electrically Welded Constructions	6 ea	216-26	12 Oct 50	
Switch-Pressure Dual Control for General Refrigeration Applications	10 ea	216-26	12 Oct 50	
Hinges—Heavy Duty Replacements for Heavy Walk-in Cooler Doors	2 pr	216-26	12 Oct 50	
Universal Cooler Door Lock, Inside Push Rod	1 ea	216-26	12 Oct 50	
Refrigerator—Mechanical, Reach-in Model S8644B Manufactured by Herrick Refrigerator Co. or Equal	1 ea	216-27	16 Oct 50	
Commanding Officer, U. S. Naval Air Station, Corpus Christi, Texas				
Range—Cooking—Gas—Chambers Model 90-C, or Equal	5 ea	216-28	16 Oct 50	
Sink Unit, Double Sink Unit, Double	1 ea	216-29	17 Oct 50	
Dehumidifier Kit—Photographic Type A-1 in A/W Spec. MIL-D-4014	508 ea	51-679	6 Oct 50	
Contracting Officer, 3151st Electronics Group, Watson Laboratories AMC, Red Bank, N. J.				
Services and Material to Install Heating System	1 job	92	12 Oct 50	
Commanding Officer, Frankford Arsenal, Philadelphia, Pa.				
Parts for York Freon Compressor	Various	210	25 Oct 50	
Elements and Floor Elements	6 ea	211	27 Oct 50	
Heating Furnace	3 Items			
Airline Supply Office, 700 Robbins Avenue, Philadelphia, Pa.	400 ea	H51894	17 Oct 50	
Supply and Fiscal Officer, Naval Air Station, Pensacola, Fla.				
Dishwasher, High Speed Two Tank, Fully Automatic Glass Washer, Brush Type, with Air Eliminator and Spray Type Rinse	1 ea	204-30	18 Oct 50	
Scraping and Pre-Wash Machine	2 ea	204-30	18 Oct 50	
Commanding Officer, U. S. Naval Air Station, Corpus Christi, Texas				
Oven—Roasting—2 Oven, One Above the other, size of each, Width 31 1/2 Inches, Depth 33 1/2 Inches, Height 57 1/2 Inches, Garland Model 2-29CCX or Equal	8 ea	216-32	17 Oct 50	
Officer-in-Charge, Navy Purchasing Office, Washington, D. C.				
Boiler, Hot Water Heating Complete	20 no	2727-S	2 Nov 50	
Irons, Flat, Electric	330 ea	3965	17 Oct 50	
Six Pound Irons, Non-Automatic				
District Public Works Office, Twelfth Naval District, Federal Office Bldg., San Francisco, Calif.	One Job	25439	18 Oct 50	
Replacement of Steam Distribution Piping at the Naval Air Station, Oakland, Calif.				
Deposit of \$10.00 Required				

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
Chief, Purchase Division, Federal Supply Service, General Services Administration, Denver, Colorado	18 Items	1071	10-13-50
Heating Materials	7 Items	1079	10-6-50

matic controls for the oven, the rear surface unit, and the appliance outlet.

Model G provides Gibson's ConSealed oven unit and a warmer drawer. It is listed at \$359.95.

Gibson has two home freezer models for 1951. Model HF 1000 is a 10-cu. ft. freezer with a frozen food capacity of 360 lbs. This model has sliding shelves and a safety lock on its counter-balanced lid. It carries a list of \$319.95.

Model HF1890 is an 18-cu. ft. cabinet with 630 lbs. capacity. A standard compartment provides for a storage capacity of 542 lbs.

A fast freezing section provides a special compartment for freezing 87 lbs. of food. In the big storage com-

partment are four sliding baskets. An automatic light illuminates the entire cabinet when the counter-balanced lid is raised.

The new and exclusive feature on this freezer is the stainless steel work surface lid over the fast freezing compartment. Mounted on counter-balanced hinges the lid provides a packaging and processing area right at the freezer source.

Both lids have safety tumbler locks to guard food while the owner is away. The hermetically sealed compressor plus Gibson's special insulation holds the freezer temperature at 0° and below. It carries a list of \$519.95.

The two freezers offered by Gibson

potential sub-contractors may submit their bids as soon as possible.

Description of the materials or items wanted are necessarily brief, but anyone interested can write, phone, or wire to the office listed and obtain complete details. Be sure to mention Reference No. of each invitation or contract.

Data published below is collected by the U. S. Department of Commerce.

Chief, Supply Division, Public Buildings Service, Room 810, 1114 Commerce St., Dallas, Texas
New Gas Fired Water Heater, Lubbock, Texas
Post Office

Chief, Purchase Division, Federal Supply Service, General Services Admin., Room 7120, 7th and D Sts., S. W., Washington 25, D. C.

Low Temp. Storage Cabinets 28 ea SF-93239 10-18-50
Electric Water Coolers 145 ea 10W-92210-R 10-19-50
Drinking Land Use

Chief, Supply Section, Public Buildings Service, General Services Administration, Washington 25, D. C.

Steam, 600 lb. Pressure 16 ea 345 10-17-50
Electric Kitchen Cooking Equipment, 4 Items 6 pcs 344 10-17-50

Vegetable Peeler 1 ea 343 10-16-50
Vegetable Steamer 1 ea 343 10-16-50
Electric Food Mixer 1 ea 343 10-16-50
Electric Oven 1 ea 342 10-16-50
Electric Roll Warmer 1 ea 342 10-16-50

Chief, Purchase Division, Federal Supply Service, General Services Administration, Denver, Colo.

Pipe and Fittings, Wrought Iron 20 items D-1131 10-15-50
Canal Gates, Cast Iron Frame, 37 ea D-1130 10-13-50
Ground Seats, 15"

Chief, Purchase Division, Federal Supply Service, General Services Administration, 2400 Fourth Ave., South, Seattle 4, Wash.

Electric Appliances Ranges, 5 ea 2-1772-1 10-17-50
Washing Machines, Etc.

Chief, Purchase Branch, Federal Supply Service, General Services Admin., Room 7120, 7th and D Sts., S. W., Washington 25, D. C.

Electric Water Coolers 145 ea 10W-92110-R 10-19-50
Drinking Land Use

Chief, Supply Section, Public Buildings Service, General Services Administration, Washington 25, D. C.

Salvador Prewash Unit 1 ea 352 10-18-50
Garbage Disposal Unit 1 ea 352 10-18-50
Fan Parts for G-E 16 Inch Misc 349 10-17-50

Oscillating Fans

Chief, Administrative Services Section, Public Buildings Service, General Services Admin., 1124 U. S. Post Office, Chicago, Ill.

Heating and Plumbing Repairs One Job 10-16-50
Etc., Louisa, Ky., Post Office One Job 10-25-50
New Water Softener, Etc. Ripon, Wisconsin, Post Office One Job 10-25-50
New Radiators, Etc. Carthage, Ill., Post Office One Job 10-25-50
Stainless Steel Sink 1 ea 4-ADM-109 10-12-50
Electric Water Cooler 1 ea 4-ADM-110 10-20-50

U. S. DEPARTMENT OF COMMERCE

Description Quantity Reference No. App. Bid Date

Chief, Procurement Branch, Civil Aeronautics Administration O'Hare Field, Chicago International Airport, Park Ridge, Ill.

Filters, 24" x 24" x 2" 48 ea 31-220 10-13-50

Dustpan or Equal

Chief, Gulf Coast Branch, Division of General Services, Maritime Administration, New Orleans, La.

7 Hygrometer 1 ea

Chief, Procurement Section, National Bureau of Standards, 620 11th St., N. W., Washington 25, D. C.

Steam Unit Heaters 3 ea B-2-538-51 10-6-50

Chief, Procurement Branch, Civil Aeronautics Administration, Alaska Supply Branch, 414 First Ave., South, Seattle 4, Wash.

Thermostat, BM-2174 56 ea 851-11 10-16-50

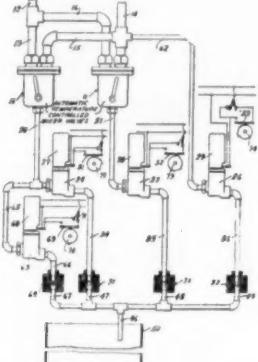
Valve, P-330-1 240 ea 851-11 10-16-50

Valve, P-417-3 40 ea 851-11 10-16-50

PATENTS

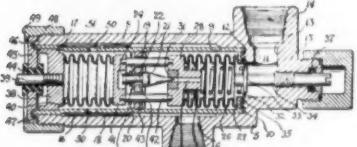
Week of May 9
(Continued)

2,506,700. FLUID CONTROL SYSTEM. Thomas B. Chace, Winnetka, Ill., assignor to The Dole Valve Co., Chicago, Ill., a corporation of Illinois. Application July 14, 1944, Serial No. 544,954. 2 Claims. (Cl. 236-12.)



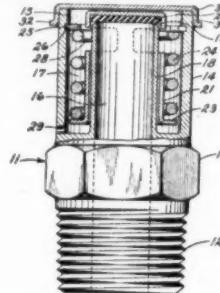
1. A fluid control system comprising at least two automatic temperature controlled mixer valves, each mixer valve having a pair of inlet ducts and a mixed fluid outlet duct, one of said inlet ducts being arranged to be connected to a source of fluid of relatively high temperature and the other being arranged to be connected to a source of fluid of relatively low temperature, the temperature of the mixed fluid automatically maintained in the outlet duct being a predetermined value between said high and low temperatures, a plurality of flow control means, each means including a shut-off valve and a device for automatically maintaining a constant predetermined rate of fluid flow therethrough when said shut-off valve is opened, there being at least two more flow control means than there are mixer valves, each of said outlet ducts being connected to the upstream side of a different one of said flow control means, the upstream side of two additional ones of said means also being connected, respectively to one of said inlet ducts and one of said outlet ducts, said two additional flow control means providing rates of flow different from the others of said flow control means, and a member providing a common delivery passageway to which the downstream side of each of said flow control means is connected.

2,506,724. EXPANSION VALVE. George O. R. Lindgren, Willoughby, Ohio, assignor to The Weatherhead Co., Cleveland, Ohio, a corporation of Ohio. Application Oct. 2, 1945, Serial No. 619,734. 6 Claims. (Cl. 236-92.)



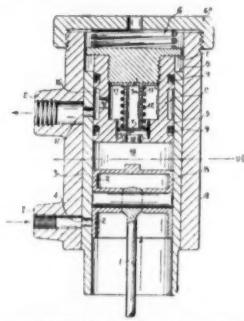
1. A thermostatic expansion valve including housing means, a bellows within said housing means and sealed from the interior thereof, a baffle in said housing means and forming therewith a first chamber for said bellows and a second chamber, an aperture in said baffle, valve operator means connected to said bellows and extending through said baffle aperture, male and female valve members in said second chamber, one of said valve members being connected to said valve operator means and the other being mounted in said second chamber, a fluid outlet leading from said female valve member, said bellows and valve members being arranged so that when expanded the bellows moves said valve to open position, a tube communicating with the interior of said bellows and having an end adapted to be positioned in heat exchanging relation with a member whose temperature is to be controlled, said tube and the interior of said bellows being charged with a fluid with a pressure such that part of said fluid is in liquid phase and part in vapor phase during normal operation of said valve, a fluid inlet means in said housing means leading to said first chamber, fluid passageway means between said chambers, whereby incoming fluid bathes said bellows in said first chamber and thence flows through said passageway means to the second chamber, through said female valve member and out said fluid outlet.

2,506,737. RELIEF VALVE CAP. Joseph N. Paquin, Euclid, Ohio, assignor to The Weatherhead Co., Cleveland, Ohio, a corporation of Ohio. Application March 25, 1948, Serial No. 17,090. 2 Claims. (Cl. 137-53.)



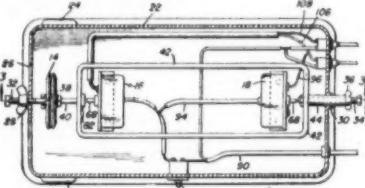
1. A relief valve comprising a body including a tubular outlet portion, a valve seat and a movable closure member therefor within the body, resilient means holding said closure member against said seat, and a cap yieldably retained on said tubular outlet portion closing said outlet, the said resilient means exerting a greater force than the force required to remove said cap from said outlet, said cap being of sufficient strength to resist rupture under the force required to remove said cap from said outlet, whereby the cap protects the interior of the outlet portion against entry of foreign material and is bodily displaced from said tubular outlet portion upon the occurrence of flow sufficiently great to develop pressure within the outlet portion relatively small compared to the pressure exerted by said resilient means.

2,506,743. COMPRESSOR CONTROL. Howard E. Rose, Peninsula, Ohio, assignor to The Weatherhead Co., Cleveland, Ohio, a corporation of Ohio. Application Feb. 12, 1946, Serial No. 647,053. 4 Claims. (Cl. 230-21.)



1. In combination in a compressor having a reciprocating piston, a cylinder, and inlet and outlet ports; a member slidably mounted in said cylinder and having one face cooperating with said piston and cylinder to define the entire clearance volume in the pressure chamber of said compressor, said movable member having its opposite face subjected to a constant pressure independent of that created by the compressor, said movable member being spring loaded to reduce the clearance volume in said pressure chamber, pressure in said clearance volume acting on said movable member and against said spring to increase the clearance volume during the compression stroke, said movable member being balanced with regard to outlet pressure, means to limit the stroke of said movable member, the change in clearance volume being uniform and directly proportional to motion of said movable member during the entire range of motion thereof.

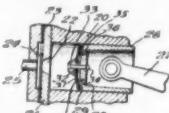
2,506,748. THERMOSTATIC SWITCH. Joseph P. Stefan, Park, Kans. Application Oct. 15, 1947, Serial No. 779,852. 1 Claim. (Cl. 200-140.)



A circuit closer for a temperature alarm and correction system comprising a casing, a yoke slidably mounted in said casing, a thermostat wafer unit adjustably mounted in the casing and operative-

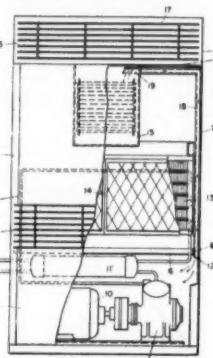
ly connected to said yoke, said yoke having a switch operating member fixed on one end of the yoke and an adjustable switch operating member on the opposite end of the yoke, switches mounted on said casing and having contacts individually operated by said switch operating members, whereby the adjustment of the wafer unit adjusts the yoke with reference to both switches and adjustment of said adjustable switch operating member affects the operation of one switch.

2,506,751. COMPRESSOR SUCTION VALVE. Allen Trask, Chicago, Ill. Application Nov. 3, 1945, Serial No. 626,535. 7 Claims. (Cl. 230-228.)



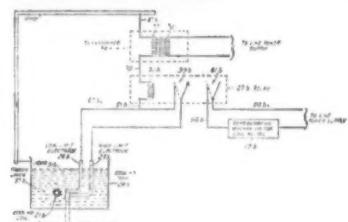
1. In a suction valve assembly a piston, a substantially flat valve seat on the head of said piston, a resilient suction valve with a spherical curvature adapted to substantially flatten out so as to conform to and engage the valve seat, the concave face of the valve being disposed toward the piston head, means for retaining the valve normally in unseated condition with the center of the valve spaced from the valve seat, and a fluid port in said valve seat, and a fluid port in said valve seat.

2,506,758. SELF-CONTAINED AIR CONDITIONING UNIT. Henry S. Woodruff, Cazenovia, N. Y., assignor to Carrier Corp., Syracuse, N. Y., a corporation of Delaware. Application Feb. 27, 1947, Serial No. 731,363. 1 Claim. (Cl. 62-129.)



In a self-contained air conditioning unit, the combination of a first compartment having side walls, a top wall and a base, an evaporator disposed within said compartment and supported by the walls thereof, a centrifugal fan disposed within said compartment and supported by the walls thereof, said fan serving to draw air to be cooled through said evaporator and to discharge the cooled air into a second compartment for supply to an area being conditioned, a third compartment containing a condenser, a compressor, and a motor for actuating the compressor, the condenser and the compressor in said third compartment being connected to the evaporator in said first compartment cooling medium being supplied to said condenser in heat exchange relation with refrigerant therein, and a duct disposed in said first compartment connecting the discharge end of the fan with said third compartment, said duct having an extended portion extending within the path of the discharged stream of cooled air to direct cooled air within the duct, said duct extending in a horizontal direction adjacent the top wall of said first compartment and then extending in a vertical direction adjacent a side wall thereof to form a passage between the discharge end of said fan and the third compartment whereby a minor portion of conditioned air is supplied by the fan to said third compartment in heat exchange relation with the compressor and motor therein.

2,506,775. FREEZING TEMPERATURE CONTROL. George V. Calabrese, Chicago, Ill., assignor to Lumenite Electronic Co., Chicago, Ill., a corporation of Illinois. Application April 23, 1947, Serial No. 743,281. 11 Claims. (Cl. 62-141.)

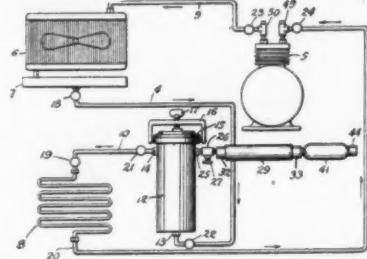


1. In a cooling system for an electrically conductive liquid, said system having a cooling member associated with intermittently operable means for cooling by said cooling member below the freezing point of said liquid to cause a layer of frozen liquid to accumulate on said member, means for regulating the thickness of said layer between predetermined limits comprising: an electrical control circuit including two electrodes mounted within the liquid and spaced at different distances from said member, and including the normally unfrozen bulk portion of said liquid; and means in said circuit responsive to changes in electrical conductivity of said circuit when freezing and thawing takes place at the respective electrodes to control the starting and stopping of said cooling means to regulate the thickness of said layer between minimum and maximum limits corresponding respectively to the distances of said electrodes from said member.

2,506,806. MOISTURE INDICATOR. George D. Metzger, Cincinnati, Ohio. Application Feb. 1, 1947, Serial No. 725,943. 13 Claims. (Cl. 62-115.)

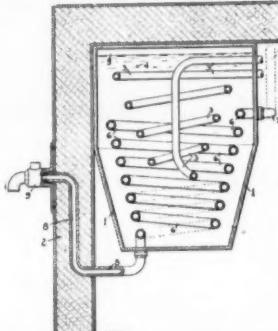
1. In combination, a refrigeration apparatus comprising a compressor, a condenser, an expansion valve, and an evaporator, and conduit means adapted to form a closed refrigerant circuit including the aforesaid constituents, a refrigerant releasing means interposed in said circuit including an expansion chamber body and a valve adapted to release a limited quantity of refrigerant from the circuit

into the expansion chamber for vaporizing the refrigerant, and a replaceable water and moisture indicator removably at-



tached to said expansion chamber body, said indicator being in the form of a transparent cartridge including a chemical visibly changeable as to at least one of its characteristics, when subjected to water-bearing refrigerant.

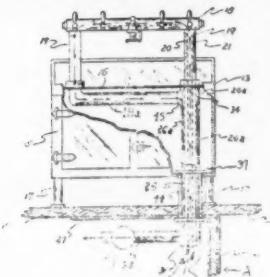
2,506,840. WATER COOLER WITH THERMAL INSULATED WATER COCK. Bandilio Jesus Pique, Ampliacion de Almendares, Marianao Township, Havana, Cuba. Application June 21, 1946, Serial No. 678,420. In Cuba Oct. 26, 1945. 3 Claims. (Cl. 62-141.)



1. A water cooling device comprising insulated walls defining a compartment, a closed container within the compartment, said container having a major and minor axis, a helical coil adapted to convey refrigerant positioned in the closed container, another helical coil adapted to convey water to be cooled also positioned in the closed container and surrounding the refrigerant coil, a feed water conduit, a discharge conduit of substantially Z shape, an exterior spigot, the last two mentioned conduits being formed of a poor heat conducting material, said feed water conduit having a major portion lying in a plane parallel to and spaced from the major axis of the closed container, the major portion having its ends placed at upper and lower

levels, its lower level end being connected to one end of the water coil for feeding water to the coil, said Z-shaped discharge conduit having an intermediate portion and two end portions, the intermediate portion lying in a plane parallel to and spaced from the major axis of the closed container and being embedded in one of the insulated walls, the two end portions being positioned at upper and lower levels and being out of alignment with each other and such lower level end portion being connected to the other end of the water coil and the higher level end portion being connected to the exterior spigot, the Z-shaped discharge conduit being arranged to cooperate with the water coil to form a trap, and said closed container being almost completely filled with a liquid having a freezing point higher than the medium to be cooled.

2,506,843. MEANS FOR COOLING BEVERAGE PIPES. George Seiler, Chicago, Ill. Application Jan. 28, 1946, Serial No. 4,797. 1 Claim. (Cl. 62-141.)



In a device for circulating cooled air in a closed path in heat exchange relationship with beer supply pipes; a cylindrical casing having a side outlet and a lower opening; a collar adapted to mount said casing on a support member; a pipe having one end thereof mounted in the lower opening of said casing and normally enclosing a substantial part of the beer supply pipes; a header carrying beer supply valves and being communicatively connected with the pipe; a cylinder connected to one end portion of said casing and surrounding said pipe and spaced therefrom; a collar adapted to mount said cylinder, a plurality of connected-together pipes communicatively connecting the upper portion of said cylinder and portion of said header, said first mentioned pipe, said header and said plurality of pipes and said cylinder providing a closed path through which cold air may be circulated to maintain the beer supply pipes in said first mentioned pipe at relatively cold temperatures.

(To Be Continued)

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

EXPERIENCED MAJOR appliance service manager, age 39. Fourteen years in electric appliance service work. Eight years as service manager for distributor. Four years road experience with nationally known major appliance company. Would prefer position with a distributor, but will consider traveling for a factory. BOX 3587. Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

ENGINEER FOR product design engineering dept. of freezer and refrigeration manufacturer. Principally cabinet and refrigeration system engineering. Should have some experience including design and testing in this field, but will consider man with sufficient ability and initiative to apply his fundamental knowledge to compensate for lack of experience. Should know materials, and be familiar with general engineering, design, and drafting practices. Good opportunity with expanding organization. Reply to General Mgr., AMANA REFRIGERATION, INC., Amana, Iowa.

SEALED UNIT repair man: If you have had considerable experience in the rebuilding of sealed units, you may have an opportunity to join the staff of a leading trade school as an instructor. Good salary, paid vacations, permanent position. Tell us all about yourself. PRACTICAL TRADES INSTITUTE, INC., 25 University Ave. S.E., Minneapolis, Minnesota.

REFRIGERATION ENGINEER. Midwest manufacturer of hermetic refrigeration systems and specialized contract products has position available for product development and laboratory assistant. Write giving full qualifications and background. BOX 3584. Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

WHOLESALE SEALED unit rebuilding. We will rebuild and convert your unit to "Freon-12." One year guarantee. Write for price list and shipping instructions. ADVANCE REFRIGERATION COMPANY, 829 East McNichols Road, Detroit 3, Mich.

INVENTORY REDUCTION sale: Prominent brand air conditioners, 3 phase, 3 ton-\$700; 5 ton-\$820. Bottle coolers, #R-18 cases-\$260; #T-27-\$350. Ice cubers. Plate coils. Small blowers. Coin Meters-\$5. Compressors. Bargain prices. BEARDSLEY REFRIGERATION CO., 1274 Velp St., Green Bay, Wisc. Howard 5710.

COMPRESSOR, NEW 7 1/2 H.P. evaporative type, at less than distributor's cost. Also 3' 6" auto close batten doors with track headers, all heights at bargain price. BIMEL CO., Cincinnati, Ohio.

FOR SALE. 200 ton York air conditioner, Model E.O. Unit includes: compressor 200 H.P., 2,300 V. G.E. synchronous motor; exciter; automatic controls; circulating 20 H.P. pumps; condenser and cooler complete with "Freon." Slightly used. Best offer accepted. John Bascom, Maintenance Dept., CLAROSTAT MFG. CO., INC., Dover, New Hampshire.

PITTSBURGH ELECTRIC dryer, evaporator. Model No. BAC-25, double tank type, complete, like new. Original cost \$1,000.00. Will sell at \$500.00. HOWARD REFRIGERATOR CO., 4745 Worth Street, Philadelphia 24, Pa.

PROMINENT BRAND liners for 10 cubic ft. glass front frozen food cabinets, 42 1/4" long, 19" deep, 22" high. Also have triple Thermopane glass for same, 15 1/2" by 41", approximately 50 pieces. Liners \$48.25 each, and glasses \$19.87 each. Call UNION 4-4247, Detroit, Michigan.

6 CAN milk coolers—front opening, spray type, complete with 1/2 H.P. self-contained units. New, in original crates, but not current model. \$275.00 F.O.B. St. Louis. BOX 3585, Air Conditioning & Refrigeration News.

NEW—TWO-TEMPERATURE cooler 7' x 5'. Baked finish metal exterior, galvanized interior. Reach-in freeze section 38 cu. ft. balance cooler space. Complete with plate coils, blower coil, valves, racks, (everything but condensing unit). Knocked down. \$650.00 F.O.B. St. Louis. BOX 3586, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

DISTRIBUTING DEALER lines wanted! Major and traffic appliances Ohio-Indiana-Michigan territory or part. We give personal contact, sales meetings, full promotional effort. Complete history and references will be given. BOX 3579. Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

PROFITABLE COMMERCIAL refrigeration and air conditioning sales and service business in East Florida city. Owner retiring for reasons of health. Now do 75% of commercial sales and service in area. Cold storage work in addition. Inventory includes new Dodge truck. Around \$10,000 to purchase. BOX 3588. Air Conditioning & Refrigeration News.

SCHOOLS

DETROIT AIR Conditioning Institute offers instructions in air conditioning, heating, refrigeration, ventilating, sheet metal layout, and heat pump engineering. Preparatory and advanced courses available. Fall classes start October 26. Write for free information. Veteran approved. DETROIT AIR CONDITIONING INSTITUTE, Department D, 4258 Woodward, Detroit, Michigan.

MISCELLANEOUS

EXTRA \$ for refrigeration dealers. Frigidaire, Crosley, Kelvinator, Norge sealed units rebuilt. Precision parts used. One year unconditional warranty. We furnish crates. Write or wire for shipping instructions and special dealers' price. REFRIGERATION UNIT REBUILD CO., 138 South Eighth Street, Department N, Cambridge, Ohio.

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10-9-50

Over 332,000 Freezers Sold In 1st 7 Mos.

Summary for July and First Seven Months, 1950

Electric Farm and Home Freezers—Complete—Sales by Sizes—Units
Farm and home freezers complete with high and low side and cabinet, where 50% or more of the net cabinet capacity is designed for the freezing and/or storage of frozen foods.

JULY (26 Companies)					
Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total	
1. 4.9 cu. ft. and under...	5,200	...	4	5,204	
2. 5.0 to 6.9 cu. ft.	3,237	...	53	3,290	
3. 7.0 to 8.9 cu. ft.	9,595	...	242	9,837	
4. 9.0 to 10.9 cu. ft.	9,038	...	41	9,079	
5. 11.0 to 12.9 cu. ft.	20,530	...	125	20,655	
6. 13.0 to 16.9 cu. ft.	15,425	...	10	15,435	
7. 17.0 to 20.9 cu. ft.	12,424	...	11	12,435	
8. 21.0 to 29.9 cu. ft.	349	...	349	349	
9. 30.0 to 39.9 cu. ft.	402	...	402	402	
10. 40.0 to 49.9 cu. ft.	1	...	1	1	
11. 50.0 to 59.9 cu. ft. ....	...	...	...	...
12. 60.0 cu. ft. and over...	12	...	...	12	
Total—All Models ...	76,218	...	486	76,699	
Total Upright Models (included in above) ...	1,994	...	1	1,995	

FIRST SEVEN MONTHS (26-29 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total	
1. 4.9 cu. ft. and under...	16,659	...	285	16,944	
2. 5.0 to 6.9 cu. ft.	14,312	...	572	14,884	
3. 7.0 to 8.9 cu. ft.	37,407	2	1,059	58,468	
4. 9.0 to 10.9 cu. ft.	29,043	3	133	29,179	
5. 11.0 to 12.9 cu. ft.	100,638	1	452	101,091	
6. 13.0 to 16.9 cu. ft.	61,513	3	60	61,576	
7. 17.0 to 20.9 cu. ft.	46,234	...	81	46,315	
8. 21.0 to 29.9 cu. ft.	1,725	...	2	1,727	
9. 30.0 to 39.9 cu. ft.	1,832	...	1,832	1,832	
10. 40.0 to 49.9 cu. ft.	9	...	9	9	
11. 50.0 to 59.9 cu. ft. ....	...	...	...	30	
12. 60.0 cu. ft. and over...	30	...	...	30	
Total—All Models ...	329,402	9	2,644	332,055	
Total Upright Models (included in above) ...	10,196	...	30	10,226	

Participating companies: Avco Mfg. Corp.; August G. Barkow Mfg. Co.; Beatty Mfg. Co.; Ben-Hur Mfg. Co.; Carrier Corp.; The Coolerator Co.; Deep-freeze Appliance Div., Motor Products Corp.; General Electric Co.; Gibson Refrigerator Co.; Frigidaire Div., General Motors Corp.; Hotpoint, Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co. (in 3-1-50); Masterfreez Home Locker Mfg. Co.; The Maytag Co.; Norge Div., Borg-Warner Corp.; Portable Elevator Mfg. Co.; Revco, Inc.; Sanitary Refrigerator Co.; Schaefer, Inc.; Emil Steinhorst & Sons, Inc.; Seeger Refrigerator Co.; Victor Products Corp.; Westinghouse Electric Corp.; Wilson Refrigeration, Inc.; Brewer-Titchener Corp. (out 1-1-50); Oregon Ref. Co. (out 3-1-50); Sub-Zero Freezer Co., Inc. (out 6-1-50); Whiting Corp. (out 2-1-50).

Educational Sales Plan Liberalized by Hotpoint

CHICAGO — Hotpoint, Inc., has placed in effect a new educational sales plan that allows schools, colleges and universities, and other educational institutions to purchase complete kitchens and home laundries at half the recommended retail price.

Edward R. Taylor, general sales manager, in a bulletin announcing the plan to distributors, said that the appliances will be replaced periodically at no cost, so that students will be able to use current models.

The official said the new plan is more liberal than previous ones, and should result in educating a new generation to the advantages of electric living. He asserted that while electric ranges are used in only 18% of the nation's wired homes, the majority of home economics departments cook electrically.

Taylor said that although the new plan is being announced at a time when distributor and dealer orders continue to exceed production by a substantial margin, it will have long-range benefits for the entire selling organization. He pointed to the part the nation's schools are playing in advancing the concept of automatic electric living.

Tarloff General Sales Mgr. Of Toledo Distributing Firm

TOLEDO — Lawrence Tarloff has been appointed general sales manager of Toledo Appliances, Inc., distributor of Emerson television and radio, Universal major and traffic appliances, Superflame oil and gas heaters, Revco home freezers, and other electrical housewares as well as lighting fixtures and supplies.

General Mills Raises Price Of Toaster to \$22.95

MINNEAPOLIS — An increase of \$1.45 in the price of its toaster and a slight discount adjustment on its iron and steam ironing attachment have been announced by General Mills.

The company raised the price of the toaster from \$21.50 to \$22.95. The discount adjustment amounted to two tenths of 1% to distributors and retailers.

Verel Appliances Files Name

BUFFALO — A business name has been filed in the Erie County clerk's office for Verel Appliances, 1267 Abbott Rd., Lackawanna, N. Y., by Grace A. Verel.

Save shopping all over town for the right replacement control. See the new RANCO REPLACEMENT REFERENCE No. 1244 right on your Ranco wholesaler's counter—or obtain a copy from him for your own files.

Only Ranco wholesalers have this complete bulletin listing Ranco Replacements for more than 4,000 controls . . . the most complete line ever supplied to the trade. You'll find an alphabetical listing of refrigeration manufacturers, plus trade names and the Ranco Replacement Control code number. Replace it right with Ranco!



WORLD'S LARGEST MANUFACTURERS OF REFRIGERATION CONTROLS

Current Literature Available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Westinghouse Housewares Christmas Catalog Issued

KEY NO. L-1021

MANSFIELD, Ohio — A 16-page Christmas catalog of the complete line of Westinghouse electric housewares has been prepared for its dealers by the Westinghouse Electric Corp.'s appliance division here.

The catalog for consumers contains product illustrations with smaller feature cuts. Copy describes the product features and gives the retail price. Using rotogravure process on light weight stock, the catalog is designed for use as a handout or mailing piece.

The catalog is part of a nine-piece display package designed to help dealers plan an aggressive Christmas promotion of electric housewares.

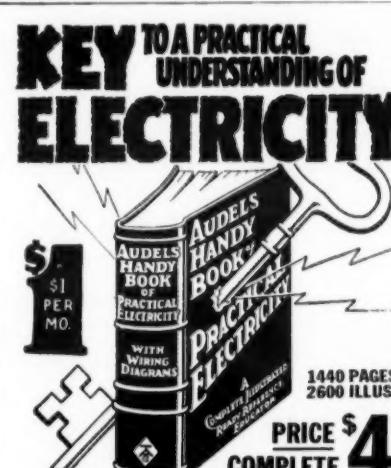
Aquatrol Book Discusses Corrosion, Scale, Algae

KEY NO. L-1022

HOUSTON, Tex.—A way by which scale, corrosion, and algae in cooling towers and other water cooling equipment can be controlled is explained in a manual recently released by Aquatrol, Inc., here.

In a non-technical manner, the booklet reveals the reasons for the development of scale in water lines and boilers. It tells how corrosion is aggravated and attacks equipment and explains how algae and bacteria develop and damage water using equipment.

Aquatrol, Inc., specializes in indus-



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Please send me "Audels Handy Book of Practical Electricity" for examination. If satisfactory, I will send you \$1 in 7 days, then \$1 monthly until \$4 is paid. Otherwise I will return it.

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Address _____
Occupation _____
Employed by _____ R-12

M-H Describes Safety of Pneumatic Transmission

KEY NO. L-1024

PHILADELPHIA—A new brochure entitled "Pneumatic Transmission Improves Safety in Central Stations" has been released by the Brown Instruments division of Minneapolis-Honeywell Regulator Co.

Called the Instrumentation Data Sheet No. 9.1-4, the folder declared that pneumatic transmission is applied to control stations for recording pressure, flow, and temperature.

Advantages gained, according to the company, are higher speed, lower installation and maintenance costs, and centralization of records.

Kates Bulletin Pictures

Direct Acting Regulator

KEY NO. L-1025

DEERFIELD, Ill.—A cutaway illustration in color which clearly explains the operation of the Kates direct acting flow regulator is the principal feature of a new bulletin, No. 502, recently issued by W. A. Kates Co., here.

Specifications are given for regulators from 0.1 to 100 g.p.m., and the bulletin says larger units are available.

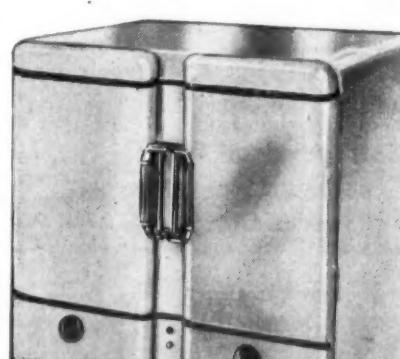
The Kates regulator is completely self-contained and entirely independent of air lines, electric current, remote valves, or other connected apparatus. It is available for controlling flow of water, acids, or oils at high or low temperatures and high or low pressure.

The Spotlight is on the NEW WILSON FREEZERS



The man who owns a Wilson Freezer will tell you why it is good business for you to sell Wilson Freezers in your territory.

A few desirable dealer territories are still open. Write for additional information.



WILSON ZERO-SAFE F-300 DELUXE SELF-CONTAINED

Gross Capacity: 29.7 cu. ft. The most modern freezer with beautiful blue-green color innovations. Front-opening doors with inner doors for reach-in convenience.



WILSON ZERO-SAFE CHEST

Capacities: 8, 15 and 23 cu. ft. Space-saving designs that hold up to 1/3 more food than other chests of same exterior dimensions.

WILSON

FARM MILK COOLERS • HOME FREEZERS • COMMERCIAL REFRIGERATION

Your Ranco Wholesaler HAS IT!
Ranco Inc.
COLUMBUS 1, OHIO



Photo by Austin Jones, Kerotest Co.
THEY WERE ELECTED: First permanent officers for the new Michigan Association of RSES include (seated) Donald Pierce, treasurer; Charles Wright, secretary; Eldon Thrash, president; (standing) Einer Hansen, first vice president; Elwood Fry, sergeant-at-arms; Charles Earl, educational director; Larry Puerer, second vice president.



Photo by Austin Jones, Kerotest Co.
THEY SPOKE: Among the educational speakers at the recent first annual convention of the newly formed Michigan State RSES association "lined up" by Charles Earl (left), general chairman, were Frank Carter of Detroit Lubricator, Wm. Rinelli of Ansul Chemical, J. T. Maloney of Acme Industries, and Ken Newcum of Remco.

* * *

Newly Formed Michigan RSES Hears 6 Educational Talks at First Conclave

DETROIT — First annual convention of the newly formed Michigan Association of the Refrigeration Service Engineers Society staged at the Sheraton hotel here recently presented a full educational program of six talks for members and guests, along with entertainment and a business meeting.

During the convention, also, the new association was formally presented with its charter by Earl Yockey, national director of the parent organization.

An informal get-together and "information please" session opened the

New... a fast, easy way to oil compressors



\$4.75

Delivered
In U.S.A.

Designed to save you time in lubricating compressors, this oil pump will more than pay for itself in one day's use. Furnished with a special one-gallon can, refill and breather cap (pump is removable). Pump eliminates spillage and reduces moisture possibilities. Order one today!

Send check or money order to . . .

REFRIGERATION SPECIALTIES CO.
Dept. 10—Box 43 • Roosevelt, New York



Gov't Plan Makes Defense Work a 'Must'--

(Concluded from Page 1, Column 5) the original contractor to sub-contractors and suppliers who are obligated to recognize its standing.

If necessary the symbol will be extended to encompass the suppliers' needs for fuel, power, transportation, or warehousing facilities, which fall under agencies other than the NPA. However, officials in the Departments of the Interior and Agricultural and at the Interstate Commerce Commission, would be affected, said they saw no need at present for issuing orders similar to that of the production authority.

Under the regulation, orders which carry the new "DO" stamp must be accepted and filled. Exceptions apply when a company already is working on another "DO" order and when acceptance of a second would delay completion of the first commitment.

The special stamp is to be applied only to products of necessity and will not extend to such defense procurement orders as office equipment, post exchange items, and certain other materials primarily non-military in nature.

Orders given the special rating must carry specific dates of delivery. In other words, open delivery contracts will receive the special assistance of a rated order. The regulation further states:

"(A) When a regulation, order, or certificate assigns a 'DO' rating to any person either by naming him or by describing the class of persons to which he belongs, that person may apply the 'DO' rating to get delivery of material or the performance of certain services.

"(B) No person may place rated orders for more material than he is authorized to rate even though he intends to cancel some of the orders or reduce the quantity of material ordered to the authorized amount before it is all delivered."

Ratings may be extended to replace material in a producer's inventory used up in filling the rated order, but the producer cannot use the rating to get material for plant improvement and expansion or other items that are to be carried as capital equipment.

If the production authority specifically authorizes a person to do so, the holder of a rating may use it to get services or to furnish raw material to a processor of material needed by the rating holder to fill a contract.

A supplier does not have to accept a rated order if the person seeking to place it will not meet regularly established prices and terms of sale, or if the order is for a product not usually made by the producer, or if filling the order would stop or interrupt the supplier's operations during the following 60 days in a way which would cause a substantial loss of production or a delay in operations.

When a person applies or extends a rating, he must put the prefix "DO" and the two digits supplied to him, for example "DO-39," on his purchase order, or on a separate piece of paper attached to the order or clearly identifying it, together with the words "certified under NPA Regulation 2."

Certifications on purchase or delivery orders must be signed by the

person placing the order or by a responsible individual who is duly authorized to sign for that purpose. The signature must be either by hand or in the form of a rubber stamp or other facsimile reproduction of a handwritten signature.

NEMA Freezer Sales--

(Concluded from Page 1, Column 2) the first seven months of that year. At the end of the first seven months of 1948—best year to date—only 282,951 freezers were sold by 35 to 36 manufacturers.

Of the July total, only 486 units were sold abroad. For the seven months, 2,644 units were moved outside the United States.

Most popular freezers are those between 11 and 12.9-cu. ft. capacity. In July, 20,655 of them were sold and in the seven months, 101,091 were sold.

Larger size freezers—13 to 21 cu. ft.—sold particularly well during July.

Norge Wringer Washer Prices Move Up \$10

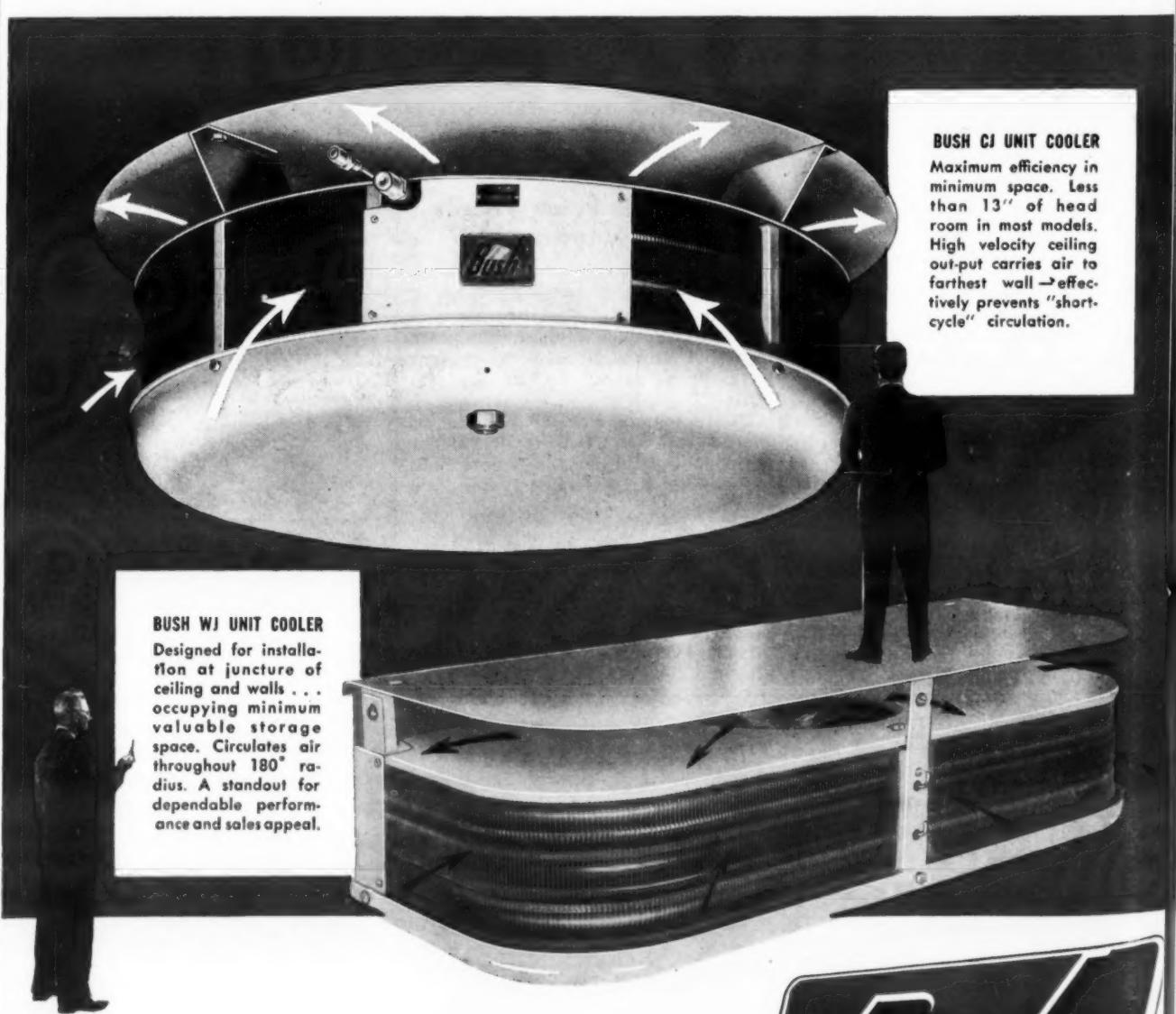
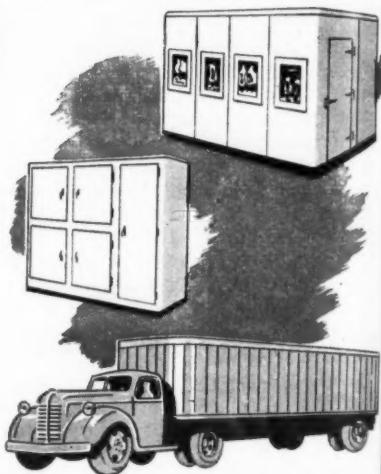
CHICAGO — A \$10 price increase on the Norge line of wringer washers was announced recently by H. L. Clary, vice president in charge of sales for the Norge division, Borg-Warner Corp.

Norge has not raised the price of its refrigerators and hopes to hold the line until the 1951 models are introduced in December, Clary said. He added that next year's refrigerator models would be priced about 10% higher than current models.

No Shrinkage! No Blast! with these new Bush Cooling Units

BUSH HEAT TRANSFER PRODUCTS are expertly designed and engineered . . . fabricated of top-quality materials to rigid specifications . . . carefully tested and accurately rated. Result: easier selling, faster installation, less service . . . more PROFIT. All this adds up to more customer satisfaction, and more

business for you. Get acquainted with the BUSH Factory Representative in your territory. He's an expert refrigeration and air conditioning engineer familiar with newest application techniques . . . a good man to know. He'll be glad to help with plans and specifications on your next important job.



BUSH CJ UNIT COOLER
Maximum efficiency in minimum space. Less than 13" of head room in most models. High velocity ceiling out-put carries air to farthest wall → effectively prevents "short-cycle" circulation.

BUSH WJ UNIT COOLER
Designed for installation at juncture of ceiling and walls . . . occupying minimum valuable storage space. Circulates air throughout 180° radius. A standout for dependable performance and sales appeal.

BUSH MANUFACTURING CO. • WEST HARTFORD 10, CONN.

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